

PROJECT CONSTRUCTION-READY CHECKLIST

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Project Name: Scriber Creek Trail Phase 2 PM: _____

Engineer's Estimate: \$ _____ Project (Bid) Number: _____

Funding Sources:	\$Amount	Obligation Dates (For Federal Funded Project)
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

Design Consultant: _____

Sub-Consultant: _____

Project Reviewed and Approved for Construction

If Applicable:

SEPA APPROVAL DATE: _____

City SEPA #: _____

Anticipated Bid Opening Date: _____

Anticipated City Council Award Date: _____

All ROW Documentation Sent to Finance _____

Federal Funded Project ONLY

PMR Binder Updated (Pre-Ad)

Design Approval Document Signed

NEPA APPROVAL DATE: _____

Permit Type: Permit #:

1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

SIGNATURES:

By: _____

Monica Thompson
Project Manager

By: _____

Michael Whaley
Construction Project Manager

By: _____

Paul Coffelt, P.E.
Traffic Engineer

By: _____

Les Rubstello, P.E.
Deputy Director, Maintenance & Operations

By: _____

Jared Bond
Operations Manager

By: _____

William A. Franz, P.E.
Director of Public Works

By: _____

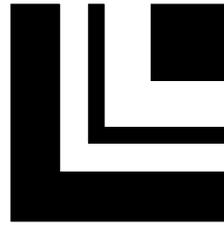
David Mach
Engineering Manager

By: _____

_____,

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CITY OF LYNNWOOD
PROJECT MANUAL
For
«Sriber Creek Trail Phase 2»
Bid #«Bid_Number»
Federal Aid Project No. (FED NUMBER)
December 2021



LYNNWOOD
WASHINGTON



12/15/2021

CONTRACT DOCUMENTS
«Scriber Creek Trail Phase 2»
«December 2021»

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SECTION 1
INVITATION FOR BIDS

1 **CITY OF LYNNWOOD**

2
3 **INVITATION FOR BIDS**

4
5 **SUBMITTAL OF SEALED BIDS:**

6 Sealed bid proposals (“Bids”) will be received by the Public Works Director, or the Public Works
7 Director’s representative, at Lynnwood City Hall, 19100 44th Avenue W., Lynnwood, Snohomish
8 County, Washington, 98036, until «Bid_Time» p.m., «Bid_Due_Date», for the following project
9 (“Project”):

10 **«Scriber Creek Trail Phase 2»**

11 Capitalized terms not defined in this Invitation for Bids shall have the meanings set forth in the
12 Project Manual of which this Invitation for Bids is a part.

13 **BID OPENING:**

14 At the time and date above stated, the Bids will be publicly opened and read aloud (“Bid
15 Opening”). Bids are to be submitted only on the bid proposal forms provided with the Project
16 Manual. All Bids must be accompanied by a bid bond, cashier's check, certified check, or postal
17 money order in an amount not less than five (5) percent of the total amount of the Bid. Bids
18 received after the time fixed for the Bid Opening will not be considered.

19 **DESCRIPTION OF WORK:**

20 This Contract provides for improvement of Scriber Creek Trail Phase 2, which runs from north of
21 200th St SW to the southwest corner of Lynnwood Transit Center, all in accordance with the
22 attached Contract Plans, these Contract Provisions, and the Standard Specifications. The work
23 includes but not limited to construction of approximately 0.4 miles of 10- to 12-foot-wide paved
24 trail with gravel shoulders, 910 feet of elevated boardwalk structure, cement concrete sidewalk,
25 curb ramps, curb and gutter, stormwater conveyance system, concrete driveway crossings, erosion
26 control, site preparation, grading, utility adjustments/relocation, roadway channelization striping,
27 pavement markings, trail amenities, permanent signage, signal system modification at the
28 intersection of 200th St SW/Cedar Valley RD and other electrical appurtenances including service
29 cabinet, signal controller, electrical lines and junction boxes, illumination system, wetland
30 mitigation planting, traffic control, and other miscellaneous work.

31 All Bids shall be based upon compliance with the Project Manual (including, without limitation,
32 the Contract Plans and Specifications). The estimated cost range for this project is (\$5,180,000 to
33 \$6,330,000). The project shall be Physically Completed within in 365 working days of the Notice
34 to Proceed.

35 **OBTAINING BID DOCUMENTS:**

36 The Project Manual for this Project (including the Contract Plans, Specifications and all other
37 Contract Documents) may be examined at the Lynnwood City Hall. All questions regarding this

1 Project shall be addressed to Monica Thompson, Project Manager, at
2 mthompson@lynnwoodwa.gov.

3 The Project Manual, plans, specifications, addenda, bidders list, and plan holders list for this
4 project are available through Builders Exchange at the City of Lynnwood’s on-line plan room.
5 Free of charge access is provided to Prime Bidders, Subcontractors, and Vendors by going to
6 <http://www.bxwa.com> and clicking on “Posted Projects”, “Public Works” and “City of
7 Lynnwood”. Bidders are encouraged to “Register” in order to receive automatic email notification
8 of future addenda and to be placed on the “Bidders List”. This on-line plan room provides Bidders
9 with fully usable on-line documents with the ability to download, print to your own printer, order
10 full / partial plan sets from hundreds of reprographic sources (on-line print order form), and a free
11 on-line digitizer / take-off tool. Contact Builders Exchange of Washington at 425-258-1303 should
12 you require assistance.

13 A non-mandatory prebid walk-through of the Project will be offered at **«PreBid_Time»** p.m.,
14 **«Prebid_Day»**, **«Prebid_Date»**, **«Prebid_Location»**. Prebid walk-through is highly encouraged
15 due to in-water work. Parking will be available at Scriber Creek Park. Meeting will be **xxxx**. Prebid
16 conference will not be held.

17 The City expressly reserves the right to reject any or all Bids, to waive irregularities, and to award
18 the Project to the lowest responsive, responsible Bidder.

19 **Bidder Proposals shall remain valid for forty-five (45) calendar days after the actual date of Bid**
20 **Opening.**

21
22 The City of Lynnwood, in accordance with the provisions of Title VI of the Civil Rights Act of
23 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders
24 that it will affirmatively ensure that any contract entered into pursuant to this advertisement,
25 disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in
26 response to this invitation and will not be discriminated against on the grounds of race, color, or
27 national origin in consideration for an award.
28

William A. Franz, P.E.
Public Works Director

29 Published: Everett Herald - «First_Published_Date», «Second_Published_Date»
30

31 Daily Journal of Commerce - «First_Published_Date», «Second_Published_Date»
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SECTION 2
BIDDER'S CHECKLIST

1 **BIDDER’S CHECKLIST**

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3 This non-inclusive checklist is included here as a convenience to the Bidder to ensure that all items
4 are properly addressed.

5
6 These items are related to the submittal of a Bid:

- 7 1. Have you included a unit or lump sum price for each bid item on the proposal?
- 8 2. Have you completed the Bid Security?
- 9 3. Has the Bid Bond or Bid Deposit (certified check) been enclosed with your Bid?
- 10 4. Is the amount of the bid guaranty at least 5% of the total amount of the Bid?
- 11 5. Has the proposal been properly signed?
- 12 6. Have you completed and signed Responsible Bidder Determination Form (NOTE: New
- 13 requirement) and Statement of Bidder’s Qualifications?
- 14 7. Have you certified receipt of addenda?
- 15 8. Have you listed all subcontractors as required by RCW 39.30.060? (Form 271-015A)
- 16 9. Have you completed the Non-Collusion Affidavit?
- 17 10. Have you signed and included the “Contractor Certification-Wage Law Compliance-
- 18 Responsibility Criteria” form (DOT Form 272-009) in the Bid Proposal Package?
- 19 11. Have you completed the “Disadvantaged Business Enterprise Utilization Certification”
- 20 (DOT Form 272-056); does the volume of work listed meet or exceed the contract DBE
- 21 goal stated in Special Provision 1-07.11?
- 22

23 The following document(s) shall be submitted with the bid, or no later than 48 hours (not including
24 Saturdays, Sundays and Holidays) after the time for delivery of the Bid proposal:

- 25 1. “Disadvantaged Business Enterprise (DBE) Written Confirmation Document” (DOT
- 26 Form 422-031) for each subcontractor listed on the DBE Utilization Certification, or
- 27 2. Provide Good Faith Effort documentation as required by Special Provision 1-02.9?
- 28 3. DBE Bid Item Breakdown (WSDOT 272-054)
- 29 4. DBE Trucking Credit Form (WSDOT 272-058)
- 30

31 The **apparent low Bidder** (and others when requested) shall submit by 12:00 P.M. (noon) of the
32 second business day following the Bid submittal deadline a written statement verifying that the
33 Bidder meets the supplemental criteria outlined by Special Provision 1-02.14, together with
34 supporting documentation. The following forms are included in Section 3 of the Project Manual
35 to be included as part of this documentation:

- 36 1. Delinquent State Taxes (form for criteria 1)
- 37 2. Claims Against Retainage and Bonds (form for criteria 4)
- 38 3. Public Bidding Crimes (form for criteria 5)
- 39 4. Termination for Cause / Termination for Default (form for criteria 6)
- 40 5. Lawsuits (form for criteria 7)
- 41 6. Responsible Subcontractor Determination Form (for named subcontractors) (Criteria 3)
- 42

43 The following items are included in the Project Manual for informational purposes only and will
44 be executed by the successful Bidder after award:

- | | |
|------------------------|--------------------------------|
| 45 1. Contract | 47 3. Payment Bond |
| 46 2. Performance Bond | 48 4. Certificate of Insurance |

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SECTION 3
BID PROPOSAL FORM

BID COVER SHEET

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PROJECT NAME: _____

BID NUMBER: _____ **BID DATE:** _____

CONTRACTOR NAME: _____

ADDRESS: _____

PHONE: _____ **EMAIL:** _____

ADDENDA RECEIVED

Addenda No.	Date Received	Name of Recipient
_____	_____	_____
_____	_____	_____
_____	_____	_____

BIDDER NAME: _____

Printed

BIDDER SIGNATURE: _____

1 **BID FOR PROJECT**

2
3 **Scriber Creek Trail Phase 2**

4
5 To the Honorable
6 Mayor & Council
7 Lynnwood, Washington
8

9 The undersigned (“Bidder”) certifies that the Bidder has examined the site, that it has taken steps
10 reasonably necessary to ascertain the nature and location of the work, that it has investigated and
11 satisfied itself as to the general local conditions which can affect the work or its costs, that it has
12 examined Project Manual (including, without limitation, the Contract Plans and Specifications,
13 and all applicable laws and ordinances with respect to the above-mentioned Project. The Bidder
14 hereby offers to perform the required Work in accordance with the terms, provisions and
15 requirements of the Project Manual at the following unit prices and/or lump sums.

16
17 As evidence of the Bidder’s good faith, cash, a bid bond, cashier’s check, or certified check in the
18 amount of five percent (5%) of the total amount of the Bid, payable to the City Treasurer, City of
19 Lynnwood (“Deposit”), is enclosed with this Bid, and using the **Bid Security Form** provided in
20 this section. The Bidder understands and hereby agrees that, should this Bid be accepted, and the
21 Bidder fail or refuse to enter into a Contract and furnish the required bonds or liability insurance,
22 the Bidder will forfeit the Deposit to the City, as provided in the Project Manual.

23
24 The Bidder fully understands and agrees that the unit prices submitted in this Bid shall apply to
25 the quantity actually used, regardless of its relation to the quantity shown in the Bid, as further
26 specified herein. The Bidder further understands and agrees that where the City has estimated and
27 include dollar amounts that are to be paid per force account, all such dollar amounts are to become
28 part of the Bidder’s total bid. However, the City does not warranty expressly or by implication
29 that the actual amount of work or the cost of work will correspond with those estimates and that
30 payment will be made on the solely basis of the amount of work actually authorized by the City in
31 accordance with the Contract Documents.

32
33 The Bidder freely states that the Bidder is familiar with the provisions of the competitive bidding
34 statutes of the State of Washington, specifically the provisions of Chapter 9.18 RCW, and certifies
35 that with respect to this Bid, there has been no collusion or understanding with any other person
36 or entity to prevent or eliminate full and unrestricted competition upon bidders on this public works
37 project.

38
39 The Bidder further understands that the City reserves the right to award the Work based on bids
40 received and available funding and, in addition, to reject any or all bids. The Bidder further
41 understands that the City reserves the right to make award within forty-five (45) calendar days of
42 the Bid Opening specified in the Invitation to Bid and that the Bidder guarantees the Bidder’s Bid
43 for said duration.

1 **Base Bid Schedule:**
2

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
1.	1-04	UNEXPECTED SITE CHANGES	1	CALC	\$	\$
2.	1-05	STRUCTURE SURVEYING	1	L.S.	\$	\$
3.	1-05	ROADWAY SURVEYING	1	L.S.	\$	\$
4.	1-05	LICENSED SURVEYING	1	EST	\$	\$
5.	1-05	ADA FEATURES SURVEYING	1	L.S.	\$	\$
6.	1-05	RECORD DRAWINGS (Min. Bid: \$5000.00)	1	L.S.	\$	\$
7.	1-07	SPCC PLAN	1	L.S.	\$	\$
8.	1-08	TYPE B PROGRESS SCHEDULE (Min. Bid: \$15,000)	1	L.S.	\$	\$
9.	1-09	MOBILIZATION	1	L.S.	\$	\$
10.	1-10	PROJECT TEMPORARY TRAFFIC CONTROL	1	L.S.	\$	\$
11.	1-10	TRAFFIC CONTROL SUPERVISOR	1	L.S.	\$	\$
12.	1-10	FLAGGERS	4816	H.R.	\$	\$
13.	1-10	UNIFORMED POLICE OFFICER	80	H.R.	\$	\$
14.	2-01	CLEARING AND GRUBBING	0.76	ACRE	\$	\$
15.	2-01	CLEARING	0.50	ACRE	\$	\$
16.	2-01	UNWANTED VEGETATION CONTROL	0.57	ACRE	\$	\$
17.	2-01	REMOVING TREE OUTSIDE C&G LIMITS	29	EACH	\$	\$
18.	2-01	ROADSIDE CLEANUP	1	EST	\$	\$
19.	2-02	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1.00	L.S.	\$	\$
20.	2-02	REMOVING ASPHALT CONC. PAVEMENT	1894	S.Y.	\$	\$
21.	2-02	REMOVING CEMENT CONC. PAVEMENT	612	S.Y.	\$	\$
22.	2-02	REMOVING CEMENT CONC. CURB AND GUTTER	1125.00	L.F.	\$	\$
23.	2-02	REMOVING CEMENT CONC. CURB	225.00	L.F.	\$	\$
24.	2-02	REMOVING WATER LINE	579.00	L.F.	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
25.	2-02	REMOVING CHAIN LINK FENCE	485.00	L.F.	\$	\$
26.	2-02	REMOVAL OF PEDESTRIAN BARRIER	80	L.F.	\$	\$
27.	2-02	REMOVE FIRE HYDRANT ASSEMBLY	1	EACH	\$	\$
28.	2-02	TIMBER BRIDGE REMOVAL	1	L.S.	\$	\$
29.	2-03	ROADWAY EXCAVATION INCL. HAUL	1485	C.Y.	\$	\$
30.	2-03	GRAVEL BORROW INCL. HAUL	358	TON	\$	\$
31.	2-03	EMBANKMENT COMPACTION	162	C.Y.	\$	\$
32.	2-05	POTHOLING	100	Vertical Foot	\$	\$
33.	2-09	STRUCTURE EXCAVATION CLASS B INCL. HAUL	874	C.Y.	\$	\$
34.	2-09	SHORING OR EXTRA EXCAVATION CLASS B	6109	S.F.	\$	\$
35.	2-12	CONSTRUCTION GEOTEXTILE FOR PERMANENT EROSION CONTROL	10	S.Y.	\$	\$
36.	4-04	CRUSHED SURFACING BASE COURSE	180	TON	\$	\$
37.	4-04	CRUSHED SURFACING TOP COURSE	723	TON	\$	\$
38.	4-04	1/4-INCH CRUSHED LEDGE ROCK	15	TON	\$	\$
39.	5-04	HMA CL. 3/8" PG 64-22	237	TON	\$	\$
40.	5-04	HMA CL. 1/2" PG 64-22	287	TON	\$	\$
41.	6-02	HOLLOW CORE CONCRETE BOARDWALK (BOARDWALK #1)	4004	S.F.	\$	\$
42.	6-03	PREFABRICATED STEEL BRIDGE	592	S.F.	\$	\$
43.	6-06	PEDESTRIAN BARRIER	72	L.F.	\$	\$
44.	6-13	STRUCTURAL EARTH WALL	40	S.F.	\$	\$
45.	6-21	FRP BOARDWALK (BOARDWALK #2)	4966	S.F.	\$	\$
46.	6-21	FRP BOARDWALK (BOARDWALK #3)	4013	S.F.	\$	\$
47.	7-02	PLAIN CONC. CULV. PIPE 12 IN. DIAM.	35	L.F.	\$	\$
48.	7-04	CORRUGATED POLYETHYLENE STORM SEWER PIPE 12 IN. DIAM.	174	L.F.	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
49.	7-04	DUCTILE IRON STORM SEWER PIPE 8 IN. DIAM.	16	L.F.	\$	\$
50.	7-04	DUCTILE IRON STORM SEWER PIPE 18 IN. DIAM.	74	L.F.	\$	\$
51.	7-04	CORRUGATED POLYETHYLENE STORM SEWER PIPE 18 IN. DIAM.	667	L.F.	\$	\$
52.	7-04	TESTING STORM SEWER PIPE	931	L.F.	\$	\$
53.	7-05	CATCH BASIN TYPE 1	2	EACH	\$	\$
54.	7-05	CATCH BASIN TYPE 1L	12	EACH	\$	\$
55.	7-05	CATCH BASIN TYPE 1 W/ COMBINATION INLET	1	EACH	\$	\$
56.	7-05	CATCH BASIN TYPE 1L W/ COMBINATION INLET	4	EACH	\$	\$
57.	7-05	CATCH BASIN TYPE 2 48 IN. DIAM.	1	EACH	\$	\$
58.	7-05	CATCH BASIN TYPE 2 48 IN. DIAM. W/ COMBINATION INLET	3	EACH	\$	\$
59.	7-05	ADJUST CATCH BASIN	3	EACH	\$	\$
60.	7-05	SLIP RESISTANT LID	1	EACH	\$	\$
61.	7-05	CONNECTION TO DRAINAGE STRUCTURE	4	EACH	\$	\$
62.	7-08	PLUGGING EXISTING PIPE	3	EACH	\$	\$
63.	7-09	DUCTILE IRON PIPE FOR WATER MAIN 6 IN. DIAM.	11	L.F.	\$	\$
64.	7-09	DUCTILE IRON PIPE FOR WATER MAIN 8 IN. DIAM.	354	L.F.	\$	\$
65.	7-12	TAPPING SLEEVE AND VALVE ASSEMBLY 6 IN.	1	EACH	\$	\$
66.	7-12	GATE VALVE 8 IN.	1	EACH	\$	\$
67.	7-14	HYDRANT ASSEMBLY	1	EACH	\$	\$
68.	7-15	ADJUST WATER METER	2.00	EACH	\$	\$
69.	7-15	ADJUST WATER VALVE	5.00	EACH	\$	\$
70.	7-15	SERVICE CONNECTION 2 IN. DIAM.	4	EACH	\$	\$
71.	8-01	ESC LEAD	73	DAY	\$	\$
72.	8-01	INLET PROTECTION	36	EACH	\$	\$
73.	8-01	STABILIZED CONSTRUCTION ENTRANCE	503	S.Y.	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
74.	8-01	STREET CLEANING	584	HR.	\$	\$
75.	8-01	SILT FENCE	3945	L.F.	\$	\$
76.	8-01	EROSION/WATER POLLUTION CONTROL	1	EST.	\$	\$
77.	8-01	HIGH VISIBILITY FENCE	1975	L.F.	\$	\$
78.	8-02	TOPSOIL TYPE A	355	C.Y.	\$	\$
79.	8-02	SOIL AMENDMENT	0.493	ACRE	\$	\$
80.	8-02	PSIPE, CATALPA SPECIOSA 'HIAWATHA 2'/HEARTLAND CATALPA (2-IN. CAL)	1	EACH	\$	\$
81.	8-02	PSIPE, FRAXINUS LATIFOLIA/OREGON ASH (1-IN. CAL)	0	EACH	\$	\$
82.	8-02	PSIPE, PERSIAN SPIRE IRONWOOD (2-IN. CAL)	15	EACH	\$	\$
83.	8-02	PSIPE, PICEA SITCHENSIS/SITKA SPRUCE (8-FT. HT)	7	EACH	\$	\$
84.	8-02	PSIPE, PICEA SITCHENSIS/SITKA SPRUCE (4-FT. HT)	7	EACH	\$	\$
85.	8-02	PSIPE, PRUNUS EMARGINATA/BITTER CHERRY (1-IN. CAL)	8	EACH	\$	\$
86.	8-02	PSIPE, PSEUDOTSUGA MENZIESII/DOUGLAS-FIR (4-FT. HT)	8	EACH	\$	\$
87.	8-02	PSIPE, THUJA PLICATA/WESTERN RED CEDAR (8-FT. HT)	7	EACH	\$	\$
88.	8-02	PSIPE, THUJA PLICATA/WESTERN RED CEDAR (4-FT. HT)	6	EACH	\$	\$
89.	8-02	PSIPE, TSUGA HETEROPHYLLA/WESTERN HEMLOCK (4-FT. HT)	8	EACH	\$	\$
90.	8-02	PSIPE, AMELANCHIER ALNIFOLIA/WESTERN SERVICEBERRY (#1 CONT)	107	EACH	\$	\$
91.	8-02	PSIPE, DWARF BOXLEAF BARBERRY (#2 CONT)	94	EACH	\$	\$
92.	8-02	PSIPE, CORNUS SERICEA/RED-TWIG DOGWOOD (3FT. LIVESTAKE)	82	EACH	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
93.	8-02	PSIPE, BLUE OAT GRASS (#1 CONT)	56	EACH	\$	\$
94.	8-02	PSIPE, HOLODISCUS DISCOLOR/OCEAN SPRAY (#1 CONT)	107	EACH	\$	\$
95.	8-02	PSIPE, MAHONIA AQUIFOLIUM/TALL OREGON GRAPE (#1 CONT)	160	EACH	\$	\$
96.	8-02	PSIPE, COMPACT OREGON GRAPE (#2 CONT)	51	EACH	\$	\$
97.	8-02	PSIPE, MYRICA GALE/BOG MYRTLE (#1 CONT)	42	EACH	\$	\$
98.	8-02	PSIPE, PHILADELPHUS LEWISII/MOCK ORANGE (#1 CONT)	107	EACH	\$	\$
99.	8-02	PSIPE, PHYSOCARPUS CAPITATUS/PACIFIC NINEBARK (#1 CONT)	107	EACH	\$	\$
100.	8-02	PSIPE, RIBES DIVARICATUM/SPREADING GOOSEBERRY (#1 CONT)	82	EACH	\$	\$
101.	8-02	PSIPE, RIBES SANGUINEUM/RED FLOWERING CURRANT (#1 CONT)	107	EACH	\$	\$
102.	8-02	PSIPE, ROSA NUTKANA/NOOTKA ROSE (#1 CONT)	160	EACH	\$	\$
103.	8-02	PSIPE, ROSA PISOCARPA/CLUSTERED ROSE (#1 CONT)	82	EACH	\$	\$
104.	8-02	PSIPE, SALIX SITCHENSIS/SITKA WILLOW (3FT. LIVESTAKE)	42	EACH	\$	\$
105.	8-02	PSIPE, SPIRAEA DOUGLASII/DOUGLAS SPIREA (#1 CONT)	82	EACH	\$	\$
106.	8-02	PSIPE, GOLD MOUND SPIREA (#2 CONT)	34	EACH	\$	\$
107.	8-02	PSIPE, SYMPHORICARPOS ALBUS/Common SNOWBERRY (#1 CONT)	214	EACH	\$	\$
108.	8-02	PSIPE, GAULTHERIA SHALLON/SALAL (#1 CONT)	279	EACH	\$	\$
109.	8-02	PSIPE, MAHONIA REPENS/LOW OREGON GRAPE (#1 CONT)	279	EACH	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
110.	8-02	PSIPE, POLYSTICHUM MUNITUM/SWORD FERN (#1 CONT)	460	EACH	\$	\$
111.	8-02	PSIPE, CAREX OBNUPTA/SLOUGH SEDGE (10 CU. IN. PLUG)	2357	EACH	\$	\$
112.	8-02	PSIPE, JUNCUS TENUIS/SLENDER RUSH (10 CU. IN. PLUG)	2357	EACH	\$	\$
113.	8-02	PSIPE, SCIRPUS MICROCARPUS/SMALL FRUITED BULRUSH (10 CU. IN. PLUG)	2357	EACH	\$	\$
114.	8-02	SEEDING, FERTILIZING AND MULCHING	0.445	ACRE	\$	\$
115.	8-02	SEEDED LAWN INSTALLATION	776	S.Y.	\$	\$
116.	8-02	BARK OR WOOD CHIP MULCH	2779	S.Y.	\$	\$
117.	8-02	HABITAT LOG	8	EACH	\$	\$
118.	8-02	HABITAT BRUSH PILE	3	EACH	\$	\$
119.	8-04	CIP LOW PROFILE BARRIER CURB TYPE 1 AND TRANSITION	358	L.F.	\$	\$
120.	8-04	CEMENT CONC. TRAFFIC CURB AND GUTTER	795	L.F.	\$	\$
121.	8-04	CEMENT CONC. TRAFFIC CURB	32	L.F.	\$	\$
122.	8-04	EXTRUDED CURB	56	L.F.	\$	\$
123.	8-04	CEMENT CONC. PEDESTRIAN CURB	418	L.F.	\$	\$
124.	8-06	CONCRETE RESIDENTIAL DRIVEWAY	25	S.Y.	\$	\$
125.	8-06	COMMERCIAL AT-GRADE DRIVEWAY WITH GREEN BELT	78	S.Y.	\$	\$
126.	8-09	RAISED PAVEMENT MARKER TYPE 1	5.83	HUND	\$	\$
127.	8-09	RAISED PAVEMENT MARKER TYPE 2	0.98	HUND	\$	\$
128.	8-12	COATED CHAIN LINK FENCE TYPE 4	102	L.F.	\$	\$
129.	8-14	TYPE A CURB RAMP	1	EACH	\$	\$
130.	8-14	TYPE C CURB RAMP	1	EACH	\$	\$
131.	8-14	TYPE D CURB RAMP	8	EACH	\$	\$
132.	8-14	PEDESTRIAN CUT-THROUGH	1	EACH	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
133.	8-14	CEMENT CONC. SIDEWALK	274	S.Y.	\$	\$
134.	8-14	CONCRETE PAD FOR SURFACE MOUNT FURNITURE	95	S.Y.	\$	\$
135.	8-15	QUARRY SPALLS	5	TON	\$	\$
136.	8-19	3-RAIL COMPOSITE FENCE	163	L.F.	\$	\$
137.	8-20	ILLUMINATION SYSTEM, COMPLETE	1	L.S.	\$	\$
138.	8-20	TRAFFIC SIGNAL SYSTEM, 200TH ST / CEDAR VALLEY RD (MODIFIED)	1	L.S.	\$	\$
139.	8-20	200TH ST MIDBLOCK CROSSING	1	L.S.	\$	\$
140.	8-21	PERMANENT SIGNING	1	L.S.	\$	\$
141.	8-22	PAINT LINE	57	L.F.	\$	\$
142.	8-22	PLASTIC LINE	2644	L.F.	\$	\$
143.	8-22	PLASTIC STOP LINE	104.5	L.F.	\$	\$
144.	8-22	PLASTIC CROSSWALK LINE	1016	S.F.	\$	\$
145.	8-22	PLASTIC TRAFFIC ARROW	12	EACH	\$	\$
146.	8-22	REMOVING PLASTIC LINE	984.00	L.F.	\$	\$
147.	8-22	REMOVING PLASTIC CROSSWALK LINE	709.60	S.F.	\$	\$
148.	8-22	REMOVING PLASTIC TRAFFIC MARKING	17.00	EACH	\$	\$
149.	8-22	PREFORMED THERMOPLASTIC WARNING BAND	1	EACH	\$	\$
150.	8-22	REMOVING RAISED PAVEMENT MARKER	7	HUND	\$	\$
151.	8-30	BENCH	8	EACH	\$	\$
152.	8-30	PICNIC TABLE	5	EACH	\$	\$
153.	8-30	TRASH AND RECYCLING RECEPTACLE	2	EACH	\$	\$
154.	8-30	BIKE RACK	2	EACH	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
155.	8-30	KIOSK	3	EACH	\$	\$
156.	8-54	BOLLARD TYPE 2	4	EACH	\$	\$
157.	8-54	BOLLARD TYPE 1	2	EACH	\$	\$

SUBTOTAL, ALL BID ITEMS, BASE BID SCHEDULE \$ _____

- 1 Department of Revenue Rule 171 applies to this Work. See Special Provision Section 1-07.2.
- 2

1 **Bid Schedule Alternate A1:**
2

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
1.	1-09	MOBILIZATION	1	L.S.	\$	\$
2.	2-01	CLEARING AND GRUBBING	0.05	ACRE	\$	\$
3.	2-02	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1.00	L.S.	\$	\$
4.	2-02	REMOVING ASPHALT CONC. PAVEMENT	274	S.Y.	\$	\$
5.	2-02	REMOVING CEMENT CONC. PAVEMENT	23	S.Y.	\$	\$
6.	2-03	ROADWAY EXCAVATION INCL. HAUL	0.4	C.Y.	\$	\$
7.	2-03	GRAVEL BORROW INCL. HAUL	139	TON	\$	\$
8.	2-03	EMBANKMENT COMPACTION	64	C.Y.	\$	\$
9.	4-04	CRUSHED SURFACING BASE COURSE	64	TON	\$	\$
10.	4-04	CRUSHED SURFACING TOP COURSE	9	TON	\$	\$
11.	5-04	HMA CL. 1/2" PG 64-22	96	TON	\$	\$
12.	7-05	SLIP RESISTANT LID	1	EACH	\$	\$
13.	7-15	ADJUST AREA DRAIN	1	EACH	\$	\$
14.	8-01	INLET PROTECTION	1	EACH	\$	\$
15.	8-01	HIGH VISIBILITY SILT FENCE	188	L.F.	\$	\$
16.	8-02	TOPSOIL TYPE A	25	C.Y.	\$	\$
17.	8-02	PSIPE, CATALPA SPECIOSA 'HIAWATHA 2'/HEARTLAND CATALPA (2-IN. CAL)	1	EACH	\$	\$
18.	8-02	PSIPE DWARF BOXLEAF BARBERRY (#2 CONT)	20	EACH	\$	\$
19.	8-02	PSIPE BLUE OAT GRASS (#1 CONT)	14	EACH	\$	\$
20.	8-02	PSIPE COMPACT OREGON GRAPE (#2 CONT)	28	EACH	\$	\$
21.	8-02	PSIPE GOLD MOUND SPIREA (#2 CONT)	7	EACH	\$	\$
22.	8-02	SEEDED LAWN INSTALLATION	196	S.Y.	\$	\$
23.	8-02	BARK OR WOOD CHIP MULCH	50	S.Y.	\$	\$

Item No.	Spec. Sect.	Description	Est. Qty.	Unit	Unit Price	Amount
24.	8-14	CONCRETE PAD FOR SURFACE MOUNT FURNITURE	30	S.Y.	\$	\$
25.	8-14	PLAYGROUND RAMP	1	EACH	\$	\$
26.	8-21	PERMANENT SIGNING	1	L.S.	\$	\$
27.	8-22	PAINT LINE	235	L.F.	\$	\$
28.	8-22	PLASTIC TRAFFIC LETTER	5	EACH	\$	\$
29.	8-22	PLASTIC ACCESS PARKING SPACE SYMBOL	1	EACH	\$	\$
30.	8-22	REMOVING PLASTIC LINE	152	L.F.	\$	\$
31.	8-22	REMOVING PLASTIC TRAFFIC MARKING	1	EACH	\$	\$
32.	8-30	BENCH	2	EACH	\$	\$
33.	8-30	TRASH AND RECYCLING RECEPTACLE	1	EACH	\$	\$
34.	8-30	BIKE RACK	1	EACH	\$	\$
35.	8-31	WHEEL STOP	10	EACH	\$	\$

ALL BID ITEMS, SCHEDULE ALTERNATE A1 \$ _____

SALES TAX @ 10.4% \$ _____

SUBTOTAL, ALL BID ITEMS, SCHEDULE ALTERNATE A1 \$ _____

**TOTAL CONSTRUCTION COST
(BASE BID +ALTERNATE A1) \$ _____**

1 **BID SECURITY**

2
3 **Bid Deposit:** The undersigned Principal hereby deposits a Bid Deposit with the City of Lynnwood
4 in the form of a cash deposit, certified or cashier's check, or postal money order in the amount of
5 _____ dollars (\$_____).

6
7 **Bid Bond:** The undersigned, _____ (Principal),
8 and _____ (Surety), are held and firmly bound unto
9 the City of Lynnwood (Contracting Agency) in the penal sum of
10 _____ dollars
11 (\$_____), which for the payment of which Principal and Surety bind themselves,
12 their heirs, executors, administrators, successors and assigns, jointly and severally. The liability
13 of Surety under this Bid Bond shall be limited to the penal sum of this Bid Bond.
14

15 **Conditions:** The Bid Deposit or Bid Bond shall be an amount not less than five percent (5%) of
16 the total bid, including sales tax and is submitted by Principal to Contracting Agency in connection
17 with a Proposal for **SCRIBER CREEK TRAIL PHASE 2**, City Project No. **3398**, according to the
18 terms of the Proposal and Bid Documents.
19

20 Now therefore,

- 21 a. If the Proposal is rejected by Contracting Agency, or
- 22 b. If the Proposal is accepted and Principal shall duly make and enter into an Agreement with
23 Contracting Agency in accordance with the terms of the Proposal and shall furnish a bond for
24 the faithful performance of said Project and for the payment of all persons performing labor or
25 furnishing materials in connection therewith, with Surety or Sureties approved by Contracting
26 Agency, and shall in all other respects perform the Contract created by the acceptance of said
27 Proposal, then this Bid Security shall be released; otherwise it shall remain in full force and
28 effect and Principal shall forfeit the Bid Deposit or Surety shall immediately pay and forfeit to
29 Contracting Agency the amount of the Bid Bond, as penalty and liquidated damages.
30

31 The obligations of Surety and its Bid Bond shall be in no way impaired or affected by any extension
32 of time within which Contracting Agency may accept bids; and Surety does hereby waive notice
33 of any such extension.
34

35 Signed and dated this _____ day of _____, 20_____.

36
37 _____
38 Principal

Surety

39
40 _____
41 Signature of Authorized Official

By _____
Attorney in Fact (*Attach Power of Attorney*)

42
43 _____
44 Title

45
46 *Surety companies executing bonds must appear on the current Authorized Insurance List in the State of Washington*
47 *per Section 1-02.7 of the Standard Specifications.*
48

RESPONSIBLE BIDDER DETERMINATION FORM

Name of BIDDER: _____

Address of BIDDER: _____

City: _____ State: _____ Zip: _____

Phone number of BIDDER: _____

Email address of BIDDER: _____

The following items are to determine Responsible Bidder status (RCW 39.04.350(1):

• Contractor’s Washington State License No.: _____ Exp. Date: _____

• Unified Business Identification (UBI) No: _____

• Dept. of Labor & Industries Account Number: _____

• Employment Security Dept. Account No.: _____

• Dept. of Revenue Excise Tax Registration Number: _____

• BIDDER on L&I Infraction List? Yes No

www.lni.wa.gov/tradeslicensing/PrevWage/AwardingAgencies/violations/default.asp

BIDDER on L&I “Contractor’s Not Allowed to Bid” List? Yes No

www.lni.wa.gov/tradeslicensing/PrevWage/AwardingAgencies/DebarredContractors/default.asp

• BIDDER has completed required public works and prevailing wage training:

○ Exempt (Listed on L & I Public Works Training Exemption List

www.lni.wa.gov/TradesLicensing/PrevWage/files/ExemptFromTraining.pdf)

○ Trained (Date training completed _____)

○ Not Trained

• BIDDER has completed “Contractor Certification – Wage Law Compliance” (DOT form 272-009) and included with Bid Yes No

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct, and the BIDDER is in compliance with the responsible bidder criteria requirement of RCW 39.04.350(1).

Signature of BIDDER: _____

Printed Name of BIDDER: _____

Title _____ Date _____ Place _____

1 RESPONSIBLE SUBCONTRACTOR DETERMINATION FORM

2 (This form to be submitted by the apparent low Bidder by 12:00 P.M. (noon) of the second
3 business day following the bid submittal deadline for all named subcontractors included in
4 proposal. Otherwise, submit with "Request to Sub-Let".)
5

6 Name of PROJECT: _____

7 Name of PRIME CONTRACTOR: _____

8 Name of SUBCONTRACTOR: _____

9 Description of Work: _____

10 Address of SUBCONTRACTOR: _____

11 City: _____ State: _____ Zip: _____

12 Phone number of SUBCONTRACTOR: _____

13 Email address of SUBCONTRACTOR: _____

14 The following items are to determine Responsible Subcontractor status [RCW 39.06.020]:

15 • Contractor's Washington State License No.: _____ Exp. Date: _____

16 • Unified Business Identification (UBI) No: _____

17 • Dept. of Labor & Industries Account Number: _____

18 • Employment Security Dept. Account No.: _____

19 • Dept. of Revenue Excise Tax Registration Number: _____

20 • SUBCONTRACTOR on L&I Infraction List? Yes No

21 ini.wa.gov/tradeslicensing/PrevWage/AwardingAgencies/violations/default.asp

22 SUBCONTRACTOR on L&I "Contractor's Not Allowed to Bid" List? Yes No

23 ini.wa.gov/tradeslicensing/PrevWage/AwardingAgencies/DebarredContractors/default.asp

24 • SUBCONTRACTOR has completed required public works and prevailing wage training:

25 ○ Exempt (Listed on L & I Public Works Training Exemption List

26 ini.wa.gov/TradesLicensing/PrevWage/files/ExemptFromTraining.pdf)

27 ○ Trained (Date training completed _____)

28 ○ Not Trained

29 • SUBCONTRACTOR has completed "Contractor Certification – Wage Law Compliance"
30 (DOT form 272-009) and included with this form: Yes No

31 • Has Electrical Contractor's License, if required by RCW 19.28 Yes No Not Req'd

32 • Has Elevator Contractor's License, if required by RCW 70.87 Yes No Not Req'd
33

34 I certify (or declare) under penalty of perjury under the laws of the State of Washington that the
35 foregoing is true and correct, and the named SUBCONTRACTOR is in compliance with the
36 responsible SUBCONTRACTOR criteria requirement of RCW 39.06.020.

37 Signature of SUBCONTRACTOR: _____

38 Printed Name of SUBCONTRACTOR: _____

39 Title _____ Date _____ Place _____
40

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STATEMENT OF BIDDER'S QUALIFICATIONS

Attach additional sheets as necessary to fully provide the information required.

Name of BIDDER: _____

Address of BIDDER: _____

City: _____ State: _____ Zip: _____

Phone number of BIDDER: _____

Email address of BIDDER: _____

Website of BIDDER: _____

Contact Person for this Project: _____

Federal Employer Identification Number (EIN) (or SSN if applicable) _____

BIDDER is a(n): Individual Partnership Joint Venture
 Incorporated in the state of _____
 Limited liability company formed in the State of _____

Number of years the BIDDER has been engaged in the construction business under the present firm name, as indicated above: _____

List business names used by BIDDER during the past 5 years if different than above:

Bank Reference: _____ Account type: _____

Officer: _____ Officer's Phone No.: _____

List all those projects, of similar nature and size, completed by BIDDER within the past 5 years and the gross dollar amount of each project. **Include a reference for each.** Any attached preprinted project listing must include all this information:

Project Name	Amount	Year Completed	Owner/Reference Phone # or email
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

1 Number of projects in the past 5 years completed:
2 _____ ahead of schedule _____ on schedule _____ behind schedule.

3 List the supervisory personnel to be employed by the BIDDER and available for work on this
4 project (Project Manager, Principal Foreman, Superintendents, and Engineers):

5 <u>Name</u>	<u>Title</u>	<u>How long with BIDDER</u>
6 _____	_____	_____
7 _____	_____	_____
8 _____	_____	_____
9 _____	_____	_____
10 _____	_____	_____

11 Number of regular full-time employees: _____

12
13 List major pieces of equipment which are anticipated to be used on this Project by the Bidder and
14 note which items are owned by the Bidder and which are to be leased or rented from others:

15 _____
16 _____
17 _____
18 _____
19 _____

20
21 By signing below, the BIDDER agrees that the City shall retain the right to obtain any and all
22 credit reports.

23 Printed Name of BIDDER: _____

24 Signature of BIDDER: _____

25 Title _____ Date _____

26

Failure to return this Declaration as part of the bid proposal package will make the bid nonresponsive and ineligible for award.

NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.
2. **That by signing the signature page of this proposal, I am deemed to have signed and to have agreed to the provisions of this declaration.**

NOTICE TO ALL BIDDERS

To report rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SR

DOT Form 272-0361 EF
07/2011

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1 **NON-COLLUSION AFFIDAVIT**

2
3 (This Affidavit to be fully executed)

4
5
6 STATE OF)
7) ss.
8 COUNTY OF)
9

10 _____, affiant,

11
12 the _____
13 (President, Secretary, Manager, Firm City, or Representative)

14 of _____
15 (Name of Company or Corporation or Firm)

16
17 the person, corporation, company or firm who makes the accompanying Bid, having first been
18 duly sworn, deposes and says:

19
20 That such Bid is genuine, and not sham or collusive, nor made in the interest or behalf of
21 any person or entity not herein named; that the Bidder has not directly or indirectly induced or
22 solicited any other bidder to put in a sham bid, or any other person, firm, or corporation to refrain
23 from bidding; and that the Bidder has not in any manner sought by collusion to secure for the
24 Bidder an advantage over any other bidder.
25

Signature of President, Secretary Manager,
City, or Authorized Representative
(Circle One)

26
27 Subscribed and sworn to before me on _____.
28

Print Name: _____
NOTARY PUBLIC for the state of Washington,
residing at _____

My appointment expires: _____

Local Agency Name	CITY OF LYNNWOOD
19100 44TH AVE W LYNNWOOD, WA 98036	

Local Agency Subcontractor List

Prepared in compliance with RCW 39.30.060 as amended

To Be Submitted with the Bid Proposal

Project Name _____

Failure to list subcontractors with whom the bidder, if awarded the contract, will directly subcontract for performance of the work of structural steel installation, rebar installation, heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical, as described in Chapter 19.28 RCW or naming more than one subcontractor to perform the same work will result in your bid being non-responsive and therefore void.

Subcontractor(s) with whom the bidder will directly subcontract that are proposed to perform the work of structural steel installation, rebar installation, heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW must be listed below. The work to be performed is to be listed below the subcontractor(s) name.

To the extent the Project includes one or more categories of work referenced in RCW 39.30.060, and no subcontractor is listed below to perform such work, the bidder certifies that the work will either (i) be performed by the bidder itself, or (ii) be performed by a lower tier subcontractor who will not contract directly with the bidder.

Subcontractor Name _____
 Work to be performed _____

Subcontractor Name _____
 Work to be performed _____

Subcontractor Name _____
 Work to be performed _____

Subcontractor Name _____
 Work to be performed _____

Subcontractor Name _____
 Work to be performed _____

* Bidder's are notified that it is the opinion of the enforcement agency that PVC or metal conduit, junction boxes, etc, are considered electrical equipment and therefore considered part of electrical work, even if the installation is for future use and no wiring or electrical current is connected during the project.

DOT Form 271-015A
Revised 06/2020

Local Agency Certification for Federal-Aid Contracts

The prospective participant certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is material representation of the fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

SR

DOT Form 272-040A EF
07/2011

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Disadvantaged Business Enterprise (DBE) Written Confirmation Document

See Contract Provisions: *DBE Document Submittal Requirements*
Disadvantaged Business Enterprise Participation

THIS FORM SHALL ONLY BE SUBMITTED TO A DBE THAT IS LISTED ON THE CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION CERTIFICATION.

THE CONTRACTOR SHALL COMPLETE PART A PRIOR TO SENDING TO THE DBE.

PART A: To be completed by the bidder

The entries below shall be consistent with what is shown on the Bidder's Disadvantaged Business Enterprise Utilization Certification. Failure to do so will result in Bid rejection.

Contract Title: _____

Bidder's Business Name: _____

DBE's Business Name: _____

Description of DBE's Work: _____

Dollar Amount to be Applied Towards DBE Goal: _____

Dollar Amount to be Subcontracted to DBE*: _____
*Optional Field

PART B: To be completed by the Disadvantaged Business Enterprise

As an authorized representative of the Disadvantaged Business Enterprise, I confirm that we have been contacted by the Bidder with regard to the referenced project for the purpose of performing the Work described above. If the Bidder is awarded the Contract, we will enter into an agreement with the Bidder to participate in the project consistent with the information provided in Part A of this form.

Name (printed): _____

Signature: _____

Title: _____

Address: _____ Date: _____



Disadvantaged Business Enterprise (DBE) Bid Item Breakdown Form

1. Contract Number	2. Contract Name
3. Prime Contractor	4. Prime Contractor Representative Name
5. Prime Contractor Representative Phone Number	6. Prime Contractor Representative Email

Column 1 Name of UDBE <small>(See Instructions)</small>	Column 2 Bid Item # <small>(See Instructions)</small>	Column 3 Full/Partial <small>(See Instructions)</small>	Column 4 Quantity <small>(See Instructions)</small>	Column 5 Description <small>(See Instructions)</small>	Column 6 Unit Price <small>(See Instructions)</small>	Column 7 Total Unit Cost <small>(See Instructions)</small>	Column 8 Dollar Amount to be Applied Towards Goal <small>(See Instructions)</small>
Subtotal:						\$ 0.00	\$ 0.00
Name of UDBE	Bid Item #	Full/Partial	Quantity	Description	Unit Price	Total Unit Cost	Dollar Amount to be Applied Towards Goal
Subtotal:						\$ 0.00	\$ 0.00
Name of UDBE	Bid Item #	Full/Partial	Quantity	Description	Unit Price	Total Unit Cost	Dollar Amount to be Applied Towards Goal
Subtotal:						\$ 0.00	\$ 0.00
Name of UDBE	Bid Item #	Full/Partial	Quantity	Description	Unit Price	Total Unit Cost	Dollar Amount to be Applied Towards Goal
Subtotal:						\$ 0.00	\$ 0.00
TOTAL UDBE Dollar Amount:						\$ 0.00	\$ 0.00

DOT Form 272-054
Revised 09/2020



Disadvantaged Business Enterprise (DBE) Trucking Credit Form

PART A: TO BE COMPLETED BY THE BIDDER

This form is in support of the trucking commitment identified on the DBE Utilization Certification Form submitted with the proposal. Please note that DBE's must be certified prior to time of submittal.

Federal Aid #	Contract #	Project Name
If listing items by hours, or by lump sum amounts, please provide calculations to substantiate the quantities listed.		
Bid Item	Item Description	

Use additional sheets as necessary.

Bidder		Name/Title (please print)
Phone	Fax	Signature
Address		
		I certify that the above information is complete and accurate.
Email		Date

PART B: TO BE COMPLETED BY THE DBE TRUCKING FIRM

Note: DBE trucking firm participation may only be credited as DBE participation for the value of the hauling services, not for the materials being hauled unless the trucking firm is also recognized as a supplier of the materials used on the project and approved for this project as a regular dealer.

1. Type of Material expected to be hauled? _____
2. Number of fully operational trucks expected to be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____
3. Number of trucks and trailers owned by the DBE that will be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____
4. Number of trucks and trailers leased by the DBE that will be used on this project? _____ Tractor/trailers: _____ Dump trucks: _____

DBE Firm Name		Name/Title (please print)
Certification Number		
Phone	Fax	Signature
Address		
		I certify that the above information is complete and accurate.
Email		Date

DOT Form 272-058
Revised 09/2020

1
2 *(This form to be submitted by the apparent low Bidder by 12:00 P.M. (noon) of the second*
3 *business day following the bid submittal deadline in compliance with Special Provision 1-02.14,*
4 *Supplemental Criteria 1.)*

5
6 **DELINQUENT STATE TAXES**

7
8 **Criterion:**

9 The Bidder shall not owe delinquent taxes to Washington State Department of Revenue without a
10 payment plan approved by the Department of Revenue.

11
12 **Documentation:**

13 *Does the Bidder owe delinquent taxes to Washington State Department of Revenue?*

14
15 Yes No

16
17 If answered in the affirmative, is there a written payment plan approved by the Department of
18 Revenue in place?

19
20 Yes No

21
22 If answered in the affirmative, submit a copy of the DOR approved written payment plan with this
23 form.

24
25 Name of BIDDER: _____

26 Address of BIDDER: _____

27 City _____ State _____ Zip _____

28 Contractor's License No. _____

29 Signature of BIDDER _____

30 Title _____ Date _____

31

1 *(This form to be submitted by the apparent low Bidder by 12:00 P.M. (noon) of the second*
2 *business day following the bid submittal deadline in compliance with Special Provision 1-02.14,*
3 *Supplemental Criteria 4.)*

4
5 **CLAIMS AGAINST RETAINAGE AND BONDS**

6
7 **Criterion:**

8 The Bidder shall not have a record of excessive claims filed against the retainage or payment
9 bonds for public works projects in the three years prior to the bid submittal date, that
10 demonstrate a lack of effective management by the Bidder of making timely and appropriate
11 payments to its subcontractors, suppliers, and workers, unless there are extenuating
12 circumstances and such circumstances are deemed acceptable to the Contracting Agency.

13
14 **Documentation:**

15 *Has the Bidder had excessive claims against retainage or payment bonds for public works projects*
16 *filed against the Bidder in the three years prior to the bid submittal date that demonstrate a lack*
17 *of effective management by the Bidder in making timely and appropriate payments to*
18 *subcontractors, suppliers and workers?*

19
20 Yes No

21
22 If answered in the affirmative, submit a list with this form of the public works projects
23 completed in the three years prior to the bid submittal date that have had claims against retainage
24 and bonds and include for each project the following information:

- 25
26
 - Name of project
 - The owner and contact information for the owner;
 - A list of claims filed against the retainage and/or payment bond for any of the projects listed;
 - A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

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33 Name of BIDDER: _____

34 Address of BIDDER: _____

35 City _____ State _____ Zip _____

36 Contractor's License No. _____

37 Signature of BIDDER _____

38 Title _____ Date _____

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(This form to be submitted by the apparent low Bidder by 12:00 P.M. (noon) of the second business day following the bid submittal deadline in compliance with Special Provision 1-02.14, Supplemental Criteria 5.)

PUBLIC BIDDING CRIMES

Criterion:

The Bidder and any person with an ownership interest in the Bidder shall not have been convicted of a crime involving bidding on a public works contract within five years from the bid submittal deadline.

Documentation:

Has the Bidder or anyone with an ownership interest in the Bidder been convicted of a crime involving bidding on a public works contract within five years from the bid submittal deadline?

Yes No

Name of BIDDER or person/entity with an ownership interest in the BIDDER: _____

Address of BIDDER: _____

City _____ State _____ Zip _____

Contractor's License No. _____

Signature of BIDDER _____

Title _____ Date _____

1 *(This form to be submitted by the apparent low Bidder by 12:00 P.M. (noon) of the second*
2 *business day following the bid submittal deadline in compliance with Special Provision 1-02.14,*
3 *Supplemental Criteria 6.)*
4

5 **TERMINATION FOR CAUSE / TERMINATION FOR DEFAULT**
6

7 **Criterion:**

8 The Bidder shall not have had any public works contract terminated for cause or terminated for
9 default by a government agency during the five-year period immediately preceding the bid
10 submittal deadline for this project, unless there are extenuating circumstances acceptable to the
11 Contracting Agency.
12

13 **Documentation:**

14 *Has the Bidder had any public works contract terminated for cause or terminated for default by a*
15 *government agency during the five-year period immediately preceding the bid submittal deadline*
16 *for this project, unless there are extenuating circumstances acceptable to the Contracting Agency?*
17

18 Yes No
19

20 If answered in the affirmative, submit a statement with this form detailing the circumstances.
21
22

23 Name of BIDDER: _____

24 Address of BIDDER: _____

25 City _____ State _____ Zip _____

26 Contractor's License No. _____

27 Signature of BIDDER _____

28 Title _____ Date _____
29
30

1 *(This form to be submitted by the apparent low Bidder by 12:00 P.M. (noon) of the second*
2 *business day following the bid submittal deadline in compliance with Special Provision 1-02.14,*
3 *Supplemental Criteria 7.)*
4

5 **LAWSUITS**
6

7 **Criterion:**

8 The Bidder shall not have lawsuits with judgements entered against the bidder in the five years
9 prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts,
10 unless there are extenuating circumstances, and such circumstances are deemed acceptable to the
11 Contracting Agency.
12

13 **Documentation:**

14 *Has the Bidder had lawsuits with judgements entered against the bidder in the five years prior to*
15 *the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts?*
16

17 Yes No
18

19 If answered in the affirmative, submit a list with this form of all lawsuits with judgements entered
20 against the Bidder in the last five (5) years prior to the bid submittal date, along with a written
21 explanation of the circumstances surrounding each such lawsuit.
22
23
24

25 Name of BIDDER: _____

26 Address of BIDDER: _____

27 City _____ State _____ Zip _____

28 Contractor's License No. _____

29 Signature of BIDDER _____

30 Title _____ Date _____
31

SECTION 4

CONTRACT

INFORMATION ONLY

**The following form must be executed and submitted by the successful Bidder
within ten (10) days following notice of award.**

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1 **CITY OF LYNNWOOD**

2 **CONTRACT**

3 **THIS AGREEMENT** (“Contract”) is entered into this **(DATE)** day of **(MONTH)**, **(YEAR)** by
4 and between the City of Lynnwood (the “City”), and **(CONTRACTOR)** (the “Contractor”).

5 **Recitals**

6 This Contract is for construction of the **SCRIBER CREEK TRAIL PHASE 2 PROJECT** (the
7 “Project”), as described in more detail in the Invitation for Bids dated **(DATE)** and the related
8 Project Manual, the terms and conditions of which are incorporated herein by this reference (the
9 “Project Manual”). Capitalized terms not defined herein shall have the meanings set forth in the
10 Project Manual.

11 **Agreement**

12 The parties, in consideration of the terms and conditions contained herein, do hereby covenant and
13 agree as follows:

14 4.01 **COMPENSATION:**

15 The City promises and agrees to employ, and does employ, the Contractor to provide the
16 materials and to do and cause to be done the work provided for in this Contract and to
17 complete and finish the same according to the Project Manual (including, without
18 limitation, the Contract Plans and Specifications) and the terms and conditions contained
19 herein. The City agrees to pay the Contractor the sum of **(AMOUNT)** which includes any
20 applicable sales or use tax, according to the payment schedule attached hereto.

21 4.02 **SCOPE OF WORK:**

22 The Contractor shall do all Work, obtain all permits and furnish all labor, materials, tools,
23 equipment, transportation, supplies and incidentals required for constructing and
24 completing the Project, in accordance with this Contract, the Project Manual and the
25 Standard Specifications for Road, Bridge and Municipal Construction (English version),
26 latest edition, as issued by the Washington State Department of Transportation, the terms
27 and conditions of which are incorporated herein by this reference (collectively, the
28 “Standard Specifications”); provided that, as used in the Standard Specifications, “State”
29 means City of Lynnwood;” “Department of Transportation” means Department of Public
30 Works;” “Secretary” means “Director of Public Works.”

31 4.03 **DURATION:**

32 The Contractor shall commence the Work within 10 days after the execution of this
33 Contract and the issuance by the City of a Notice to Proceed. The Work shall be Physically
34 Completed in **365** working days (“Contract Time”). If the Work is not Physically
35 Completed within the Contract Time, the Contractor agrees to pay the City as liquidated
36 damages the sum as calculated in accordance with Section 1-08.9 of the Standard

1 Specifications for each day the Project remains uncompleted after the expiration of the
2 Contract Time. Such liquidated damages are appropriate and are agreed upon by the parties
3 because of the impracticability and difficulty of ascertaining the actual damages the City
4 would sustain in the event of noncompletion within the Contract Time.

5 4.04 BONDS:

6 The Contractor agrees to obtain Payment and Performance Bonds in accordance with, and
7 using the forms provided in, the Project Manual.

8 4.05 INSURANCE:

9 The parties agree that no liability shall be attached to the City by reason of entering into
10 this Contract, except as expressly provided herein. The Contractor specifically agrees to
11 maintain insurance coverages in accordance with the applicable provisions of the Project
12 Manual and Section 1-07.18 of the Special Provisions. The Contractor agrees that all
13 insurance policies shall include the City, and others if required by the Contract Documents,
14 as Additional Named Insureds. All insurance policies shall be endorsed to provide that
15 such policies shall be primary to any insurance carried by the City and that no policy shall
16 be canceled, materially changed or reduced in coverage until after thirty (30) days prior
17 written notice has been delivered to the City.

18 4.06 LABOR AND WAGES:

19 Prevailing wages shall be paid. Contractor specifically agrees to comply with the
20 applicable provisions of the Project Manual and Section 1-07.9 of the Standard
21 Specifications, and to file all required forms, certificates, and affidavits necessary to
22 comply with Federal and State laws before final payment shall be made by the City. Prior
23 to commencement of the Work, the latest prevailing wage rate information shall be
24 obtained from the State of Washington, Department of Labor and Industries, Industrial
25 Relations Division, General Administration Building, Olympia, WA 98501, Attn:
26 Industrial Statistician, and shall be incorporated in and become a part of this Contract.

27 4.07 RECOVERY FOR DISRUPTION OR DELAY:

28 In the event the Contractor (including any subcontractors or suppliers of any tier) is held
29 to be entitled to damages from the City for disruption or delay, it is agreed that the total
30 damages to the Contractor (including damages to any subcontractor or supplier of any tier)
31 shall be resolved in accordance with the provisions of the WSDOT Standard Specifications.
32

1 4.08 EXECUTION, CORRELATION AND INTENT:

2 By execution of this Contract, the Contractor represents and warrants that the Contractor:
3 (i) has carefully examined the Contract Documents and the Project site; (ii) has become
4 familiar with the local conditions under which the Work is to be performed and correlated
5 personal observations with requirements of the Contract Documents; (iii) is satisfied as to
6 (a) the nature, location, character, quality and quantity of the Work, (b) the labor, materials,
7 tools, equipment, transportation, supplies and incidentals to be furnished in the
8 performance of the Work, (c) the surface conditions and other matters that may be
9 encountered at the Project site or affect performance of the Work or the cost or difficulty
10 thereof, and (d) all other requirements of the Contract Documents; and (iv) agrees that the
11 Contract Time is adequate for the performance of the Work and the Contract Sum is
12 reasonable compensation for all the Work. The failure of the Contractor to adequately
13 investigate any such condition or matter shall not in any way relieve the Contractor from
14 the Contractor's obligation to perform the Work in accordance with the Contract
15 Documents within the Contract Time for the Contract Sum.

16 **IN WITNESS WHEREOF**, the parties hereto have caused this agreement to be executed in
17 triplicate as of the day and year first above written.

18 CITY OF LYNNWOOD:

CONTRACTOR:

By _____
Nicola Smith, Mayor

(Name of Contractor)

By _____

Its _____
(An Authorized Representative)

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SECTION 5

PERFORMANCE AND INDEMNITY BOND

LABOR AND MATERIALS BOND

INSURANCE CERTIFICATE

INFORMATION ONLY

The following form must be executed and submitted by the successful Bidder within ten (10) days following notice of award.

1 [NOTE: Name of Contractor must be identical to the Bidder]
2 [NOTE: Date of Bond must not be prior to date of Contract]

3 CITY OF LYNNWOOD

4 PERFORMANCE BOND

5 We, (**CONTRACTOR**), as the Contractor, and (**SURETY**), as the Surety, jointly and severally,
6 bind ourselves, our heirs, executors, administrators, successors and assigns, as set forth herein, to
7 the City of Lynnwood, Washington (the "City") for the performance of the following described
8 Contract, or for the payment of the sum of (**AMOUNT**) Dollars \$ (**AMOUNT**), in lawful money
9 of the United States. The City has awarded the Contractor a contract for the construction
10 ("Contract") of **SCRIBER CREEK TRAIL PHASE 2**.

11 The condition of this Bond is such that if the Contractor shall in all things abide by and well and
12 truly keep and perform the covenants, and agreements in said Contract, at the time and in the
13 manner therein specified, and shall indemnify and save harmless the City, as specified in the
14 Contract, this Bond shall become null and void; otherwise, it shall be and remain in full force and
15 effect.

16 The Surety agrees that no change, extension of time, alteration, or addition to the terms of the
17 Contract, or the Work to be performed thereunder, shall in any way affect its obligation on this
18 bond, and the Surety does hereby waive notice thereof.

19 Whenever the Contractor shall be, and is declared by the City to be, in default under the Contract,
20 the City having performed City's obligations thereunder, the Surety may promptly remedy the
21 default, or shall promptly:

- 22 1. Complete the Contract in accordance with its terms and conditions, or
- 23 2. Obtain a bid or bids for completing the Contract, from qualified contractors acceptable to
24 the City, in accordance with the terms and conditions of the Contract, and upon
25 determination by Surety of the lowest responsible bidder, or, if the City elects, upon
26 determination by the City and the Surety jointly of the lowest responsible bidder, arrange
27 for a contract between such bidder and the City, and make available as Work progresses
28 (even though there should be a default or a succession of defaults under the contract or
29 contracts of completion arranged under this paragraph) sufficient funds to pay the cost of
30 completion of the Project, including such costs and damages for which the Surety may be
31 liable hereunder, less the balance of the Contract Sum, but not exceeding the amount set
32 forth in the first paragraph hereof. The term "balance of the Contract Sum," as used in this
33 paragraph shall mean the total amount payable by City to Contractor under the Contract
34 and any amendments thereto less the amount properly paid by City to Contractor.

35 Any suit under this bond must be instituted before the expiration of two (2) years from the date on
36 which that payment under the Contract falls due.

37 No right of action shall accrue on this bond to or for the use of any person or corporation other
38 than the City named herein or the heirs, executors, administrators or successors of the City.

1 In the event that the City is obliged to employ legal counsel to enforce its rights under this bond
2 through negotiations or suit, the City shall be entitled to recover all attorney's fees and costs,
3 including expert costs, reasonably incurred.

4 Signed and sealed this ___ day of _____, 20__.

5

(Witness)

(Principal)

(Title)

(Witness)

(Surety)

(Title)

6

1 [NOTE: Name of Contractor must be identical to the Bidder]
2 [NOTE: Date of Bond must not be prior to date of Contract]
3 PAYMENT BOND

4 We, (**CONTRACTOR**), as the Contractor, and (**SURETY**), as the Surety, jointly and severally,
5 bind ourselves, our heirs, executors, administrators, successors, and assigns, as set forth herein, to
6 the City of Lynnwood (the "City") for payment of the sum of (**AMOUNT**) dollars (**\$(AMOUNT)**)
7 in lawful money of the United States. The City has awarded the Contractor a contract ("Contract")
8 for the construction of **SCRIBER CREEK TRAIL PHASE 2** (the "Project").

9 The condition of this Bond is such that if Contractor shall promptly make payment to all Claimants
10 (as hereafter defined) for all labor, professional services, materials or equipment used or
11 reasonably required for use in the performance of the Contract, and all taxes incurred on said
12 Contract under Title 50 and 51, RCW, and all taxes imposed on the Principal under Title 82, RCW,
13 then this Bond shall be void; otherwise it shall remain in full force and effect.

14 1. A Claimant is defined as one having a contract with the Contractor or a subcontractor for
15 labor, professional services, materials, or equipment, used or reasonably required or used
16 in the construction of the Project and the performance of the Contract (which shall be
17 construed to include that part of all electricity, water, gas, oil, gasoline, telephone or other
18 utility service or rental of equipment directly applicable to the Contract).

19 2. The Contractor and Surety hereby jointly and severally agree with the City that every
20 Claimant, who has not been paid in full before the expiration of a period of sixty (60) days
21 after the date on which the last of such Claimant's labor, professional services, materials or
22 equipment were furnished by such Claimant in connection with the Project, may sue on
23 this Bond for the use of such Claimant, prosecute the suit to final judgment for such sum
24 or sums as may be justly due such Claimant, and have execution thereon. The City shall
25 not be liable for the payment of any costs or expenses of any such suit.

26 3. No suit or action shall be commenced hereunder by any Claimant unless such Claimant
27 shall have given such notice and taken such other actions as may be required by State law.

28 4. The amount of this Bond shall be reduced by and to the extent of any payment or payments
29 made in good faith hereunder inclusive of the payment by Surety of mechanics' liens which
30 may be filed of record against the Project, whether or not claim for the amount of such lien
31 be presented under and against this Bond.
32 Signed and sealed this ___ day of _____, 20__.

(Witness)

(Principal)

(Title)

(Witness)

(Surety)

(Title)

1 **ATTENTION CONTRACTORS AND INSURANCE AGENTS**

2

3

4 **TIME IS OF THE ESSENCE**

5 CERTIFICATES OF INSURANCE MUST BE COMPLETED AS INDICATED ON THE ATTACHED SAMPLE.
6 INCOMPLETE OR ALTERED CERTIFICATES WILL BE RETURNED TO THE INSURANCE AGENT FOR
7 COMPLIANCE.

8

9 IF THE CITY DOES NOT RECEIVE A PROPERLY COMPLETED AND SIGNED CERTIFICATE OF
10 INSURANCE AND CG 20 10 07 04 ADDITIONAL INSURED ENDORSEMENT THE FOLLOWING NON-
11 EXHAUSTIVE LIST OF CONSEQUENCES MAY RESULT:

12
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17

- THE CITY CANNOT SIGN THE CONSTRUCTION CONTRACT
- WORK CANNOT BEGIN
- BREACH OF CONTRACT
- UNINSURED EXPOSURE TO CONTRACTOR
- INSURANCE AGENT WILL HAVE TO DO IT OVER

18 **INSTRUCTIONS**

- 19 1. Fax the attached sample certificate of insurance and requirements along with the insurance instructions, from
20 the construction bid specifications, to your insurance agent for completion.
- 21 2. Have your agent return the completed and signed certificate and additional insured endorsement CG 2026
22 directly back to you so that you can return with your signed contracts and mail directly to:

23 City of Lynnwood
 24 Public Works Department
 25 Attention: Construction Manager
 26 PO Box 5008
 27 Lynnwood WA 98046-5008

28
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30



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (AC, HO, Ext):	FAX (AC, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A:	
	INSURER B:	
INSURED	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADOL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPROP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED: RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input type="checkbox"/> WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER 	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
-----------------------------------	--

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ACORD 25 (2010/05)

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POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY
CG 20 10 07 04

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – SCHEDULED PERSON OR
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
<p style="text-align: center; font-size: 48px; opacity: 0.3; transform: rotate(-45deg);">SAMPLE</p>	
	Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

SECTION 6

STATE PREVAILING WAGE RATES

FEDERAL PREVAILING WAGE RATES

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[State and Federal Wage Rates are to be included in this section. NOTE that the effective date of both federal and state wage rates is the date of the bid opening.]

SECTION 7
REQUIRED CONTRACT PROVISIONS
FEDERAL AID CONSTRUCTION CONTRACTS

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273 -- Revised May 1, 2012

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with

the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this

contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and

mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may,

after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and

individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual

was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or

general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or

voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-- Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

AMENDMENT
REQUIRED CONTRACT PROVISIONS
(Exclusive of Appalachian Contracts)

FEDERAL-AID CONSTRUCTION CONTRACTS

The Federal–Aid provisions are supplemented with the following:

XII. Cargo Preference Act

1. U.S. Department of Transportation Federal Highway Administration memorandum dated December 11, 2015 requires that all federal-aid highway programs awarded after February 15, 2016 must comply with the Cargo Preference Act and its regulation of 46 CFR 381.7 (a)-(b).

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SECTION 8
SPECIAL PROVISIONS

INTRODUCTION TO THE SPECIAL PROVISIONS

(*****)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2022 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter “Standard Specifications”). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)
(May 1, 2013 Lynnwood GSP)

Revised General Special Provisions and project-specific Special Provisions are designated by “(*****)”.

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition
- City of Lynnwood Standard Plans

Contractor shall obtain copies of these publications, at Contractor’s own expense.

DIVISION 1

GENERAL REQUIREMENTS

DESCRIPTION

(March 13, 1995 WSDOT GSP)

This Contract provides for the improvement of *** Scriber Creek Trail Phase 2, which runs from north of 200th St SW to the southwest corner of Lynnwood Transit Center, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications. The work includes but not limited to construction of approximately 0.4 miles of 10- to 12-foot-wide paved trail with gravel shoulders, 910 feet of elevated boardwalk structure, cement concrete sidewalk, curb ramps, curb and gutter, stormwater conveyance system, concrete driveway crossings, erosion control, site preparation, grading, utility adjustments/relocation, roadway channelization striping, pavement markings, trail amenities, permanent signage, signal system modification at the intersection of 200th St SW/Cedar Valley RD and other electrical appurtenances including service cabinet, signal controller, electrical lines and junction boxes, illumination system, wetland mitigation planting, traffic control, and other miscellaneous work *** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(January 4, 2016 APWA GSP)

Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date

The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date

The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date

The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date

The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date

The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date

The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date

The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date

The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications, Amendments, or WSDOT General Special Provisions, to the terms “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency”.

All references to the terms “State” or “state” shall be revised to read “Contracting Agency” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

All references to “final contract voucher certification” shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive

A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate

One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Business Day

A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond

The definition in the Standard Specifications for “Contract Bond” applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents

See definition for "Contract".

Contract Time

The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Notice of Award

The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency's acceptance of the Bid Proposal.

Notice to Proceed

The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic

Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

1-02 BID PROCEDURES AND CONDITIONS**1-02.1 Prequalification of Bidders**

Delete this section and replace it with the following:

1-02.1 Qualifications of Bidder

(January 24, 2011 APWA GSP)

Before award of a public works contract, a Bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.2 Plans and Specifications

(June 27, 2011 APWA GSP)

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	*** 1 digital set (.pdf format) ***	Furnished automatically upon award.
Contract Provisions	*** 1 digital set (.pdf format) ***	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	*** 1 digital set (.pdf format) ***	Furnished only upon request.

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

1-02.4 Examination of Plans, Specifications, and Site of Work

1-02.4(1) General

(June 24, 2021 APWA GSP Option B)

The first sentence of the seventh paragraph, beginning with "Any prospective Bidder desiring...", is revised to read:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business *** 4 *** business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.4(2) Subsurface Information

(March 8, 2013 APWA GSP)

The second sentence in the first paragraph is revised to read:

The Summary of Geotechnical Conditions and the boring logs, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract.

1-02.5 Proposal Forms

(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal
(December 10, 2020 APWA GSP, Option A)

Supplement this section with the following:

The Bidder shall submit with the Bid a completed Disadvantaged Business Enterprise (DBE) Utilization Certification, when required by the Special Provisions. For each and every DBE firm listed on the Bidder's completed Disadvantaged Business Enterprise Utilization Certification, the Bidder shall submit written confirmation from that DBE firm that the DBE is in agreement with the DBE participation commitment that the Bidder has made in the Bidder's completed Disadvantaged Business Enterprise Utilization Certification.

WSDOT Form 422 031 (Disadvantaged Business Enterprise Written Confirmation Document) is to be used for this purpose. Bidder must submit good faith effort documentation only in the event the bidder's efforts to solicit sufficient DBE participation have been unsuccessful.

The Bidder shall submit a DBE Bid Item Breakdown form defining the scope of work to be performed by each DBE listed on the DBE Utilization Certification.

If the Bidder lists a DBE Trucking firm on the DBE Utilization Certification, then the Bidder must also submit a DBE Trucking Credit Form (WSDOT Form 272-058) documenting how the DBE Trucking firm will be able to perform the scope of work subcontracted to them.

Directions for delivery of the Disadvantaged Business Enterprise Written Confirmation Documents, Disadvantaged Business Enterprise Good Faith Effort documentation, DBE Bid Item Breakdown Form and the DBE Trucking Credit Form are included in Section 1-02.9.

(December 10, 2020 APWA GSP, Option B)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last two paragraphs, and replace them with the following:

The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form, provided by the Contracting Agency. Failure to return this certification as part of the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any UDBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any UDBE requirements are to be satisfied through such an agreement.

(August 3, 2015 WSDOT GSP, Option 5)

Cumulative Alternates Bidding

The Bid Proposal for this Contract requires the Bidder to bid cumulative Alternates as part of the bid. As such the Bidder is required to submit a Base Bid and a bid for each of the Alternate(s).

Bid Proposal

The Bid Proposal includes the following:

1. Base Bid
The Base Bid shall include constructing all items included in the Proposal *except* those items contained in the Alternate(s).
2. Alternate(s)
 - a. Alternate A1
Based on constructing (***) items within Sprague's Pond Mini Park parking lot (***)
The Bid items for Alternate A1 are as listed in the Bid Proposal.

Bidding Procedures

To be considered responsive the Bidder shall submit a price on each and every Bid item included in the Base Bid and all Alternate(s.)

The successful Bidder will be the Bidder submitting the lowest responsible Bid for the highest order Preference that is within the amount of available funds for the project. Available funds will be announced immediately prior to the opening of Bids. The following are listed in order from highest to lowest Preference:

1. 4. Preference 1: Lowest total for Base Bid plus Alternate A1.
5. Preference 2: Lowest total for Base Bid.

The Contracting Agency may, at their discretion, award a Contract for the Base Bid, without any additional Alternates, in the event that all Bids exceed the available funds announced. In any case, the award will be subject to the requirements of Section 1-03.

1-02.7 Bid Deposit
(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the Bidder's officer empowered to sign official statements. The signature of the person authorized to submit the Bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.9 Delivery of Proposal
(June 17, 2021 APWA GSP Option C)

Delete this section and replace it with the following:

Each Proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- DBE Utilization Certification
- DBE Written Confirmation Document from each DBE firm listed on the Bidder's completed DBE Utilization Certification (WSDOT 272-056);
- Good Faith Effort (GFE) Documentation
- DBE Bid Item Breakdown (WSDOT 272-054)
- DBE Trucking Credit Form (WSDOT 272-058)

DBE Utilization Certification

The DBE Utilization Certification shall be received at the same location and no later than the time required for delivery of the Proposal. The Contracting Agency will not open or consider any Proposal when the DBE Utilization Certification is received after the time specified for receipt of Proposals or received in a location other than that specified for receipt of Proposals. The DBE Utilization Certification may be submitted in the same envelope as the Bid deposit.

DBE Written Confirmation and/or GFE Documentation

The DBE Written Confirmation Documents and/or GFE Documents are not required to be submitted with the Proposal. The DBE Written Confirmation Document(s) and/or GFE (if any) shall be received either with the Bid Proposal or as a Supplement to the Bid. The documents shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. To be considered responsive, Bidders shall submit Written Confirmation Documentation from each DBE firm listed on the Bidder’s completed DBE Utilization Certification and/or the GFE as required by Section 1-02.6.

DBE Bid Item Breakdown and DBE Trucking Credit Form

The DBE Bid Item Breakdown and the DBE Trucking Credit Forms (if applicable) shall be received either with the Bid Proposal or as a Supplement to the Bid. The documents shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. To be considered responsive, Bidders shall submit a completed DBE Bid Item Breakdown and a DBE Trucking Credit Form for each DBE Trucking firm listed on the DBE Utilization Certification, however, minor errors and corrections to DBE Bid Item Breakdown or DBE Trucking Credit Forms will be returned for correction for a period up to five calendar days (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. A DBE Bid Item Breakdown or DBE Trucking Credit Forms that are still incorrect after the correction period will be determined to be non-responsive.

Supplemental bid information submitted after the proposal submittal but within 48 hours of the time and date the proposal is due, the document(s) shall be submitted as follows:

- 1. By facsimile to the following FAX number: **\$\$\$**, or
- 2. By e-mail to the following e-mail address: **\$\$\$**

All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

Proposals that are received as required will be publicly opened and read as specified in Section 1-02.12. The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any “Supplemental Information” (DBE confirmations or GFE documentation) that is received after the time specified above, or received in a location other than that specified above.

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which the normal work processes of the Contracting Agency resume.

1-02.10 Withdrawing, Revising, or Supplementing Proposal
(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.13 Irregular Proposals
(October 1, 2020 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
 - a. The Bidder is not prequalified when so required;
 - b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
 - c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
 - d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
 - e. A price per unit cannot be determined from the Bid Proposal;
 - f. The Proposal form is not properly executed;
 - g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;

- h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
 - i. The Bidder fails to submit written confirmation from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
 - j. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
 - k. The Bidder fails to submit a DBE Bid Item Breakdown form, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
 - l. The Bidder fails to submit DBE Trucking Credit Forms, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
 - m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
 - n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.
2. A Proposal may be considered irregular and may be rejected if:
- a. The Proposal does not include a unit price for every Bid item;
 - b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
 - c. Receipt of Addenda is not acknowledged;
 - d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
 - e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders
(May 17, 2018 APWA GSP, Option B)

Delete this Section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1-7 listed in this Section.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-7 shall be provided by the Bidder as stated later in this Section.

1. Delinquent State Taxes

- A Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder does not owe delinquent taxes to the Washington State Department of Revenue, or if delinquent taxes are owed to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

2. Federal Debarment

- A Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.
- B. Documentation: The Bidder shall not be listed as having an “active exclusion” on the U.S. government’s “System for Award Management” database (www.sam.gov).

3. Subcontractor Responsibility

- A Criterion: The Bidder’s standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder’s subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also “responsible” subcontractors as defined by RCW 39.06.020.
- B. Documentation: The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. Claims Against Retainage and Bonds

- A Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

- B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:
- Name of project
 - The owner and contact information for the owner;
 - A list of claims filed against the retainage and/or payment bond for any of the projects listed;
 - A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

5. Public Bidding Crime

- A. Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

6. Termination for Cause/Termination for Default

- A. Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances. .

7. Lawsuits

- A. Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered

against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet terms of construction related contracts

As evidence that the Bidder meets the Supplemental Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the supplemental criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the Supplemental Criteria. The Contracting Agency reserves the right to request further documentation as needed from the low Bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

1-02.15 Pre-Award Information
(August 14, 2013 APWA GSP)

This section is deleted in its entirety and replaced with the following:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids
(January 23, 2006 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.3 Execution of Contract
(October 1, 2005 APWA GSP)

Revise this section to read:

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within *** 14 *** calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of *** 5 *** additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond
(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
 - a. Is registered with the Washington State Insurance Commissioner, and
 - b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to

indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:

- a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
 - b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
 5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
 6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review
(November 30, 2018 APWA GSP)

Revise this section to read:

Any decision made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 SCOPE OF THE WORK

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications and Addenda
(December 10, 2020 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,

4. Contract Plans,
5. Standard Specifications,
6. Contracting Agency's Standard Plans or Details (if any), and
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-04.4(1) Minor Changes
(March 22, 2018, Lynnwood GSP)

Section 1-04.4(1) is supplemented as follows:

Payments for changes amounting to ***\$25,000*** or less may be made under the Bid item "Unexpected Site Changes". At the discretion of the Contracting Agency, this procedure for Unexpected Site Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes.

The Contractor will be provided a copy of the completed order for Unexpected Site Changes. The agreement for the Unexpected Site Changes will be documented by signature of the Contractor, or notation of verbal agreement. If the Contractor is in disagreement with anything required by the order for Unexpected Site Changes, the Contractor may protest the order as provided in Section 1-04.5.

Payments will be determined in accordance with Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting Agency has entered an amount for "Unexpected Site Changes" in the Proposal to become a part of the total Bid by the Contractor.

1-05 CONTROL OF WORK

1-05.4 Conformity With and Deviations from Plans and Stakes

Section 1-05.4 is supplemented with the following:
(January 13, 2021 WSDOT GSP, Option 1)

Contractor Surveying – Structure

The Contracting Agency has provided primary survey control in the Plans.

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of bridges, noise walls, and retaining walls. Except for the survey control data to be furnished by the Contracting Agency, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility.

The Contractor shall inform the Engineer when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments. All monuments noted on the plans "DO NOT DISTURB" shall be protected throughout the length of the project or be replaced at the Contractors expense.

Detailed survey records shall be maintained, including a description of the work performed on each shift, the methods utilized, and the control points used. The record shall be adequate to allow the survey to be reproduced. A copy of each day's record shall be provided to the Engineer within three working days after the end of the shift.

The meaning of words and terms used in this provision shall be as listed in "Definitions of Surveying and Associated Terms" current edition, published by the American Congress on Surveying and Mapping and the American Society of Civil Engineers.

The survey work by the Contractor shall include but not be limited to the following:

1. Verify the primary horizontal and vertical control furnished by the Contracting Agency, and expand into secondary control by adding stakes and hubs as well as additional survey control needed for the project. Provide descriptions of secondary control to the Contracting Agency. The description shall include coordinates and elevations of all secondary control points.
2. Establish, by placing hubs and/or marked stakes, the location with offsets of foundation shafts and piles.
3. Establish offsets to footing centerline of bearing for structure excavation.
4. Establish offsets to footing centerline of bearing for footing forms.
5. Establish wing wall, retaining wall, and noise wall horizontal alignment.
6. Establish retaining wall top of wall profile grade.
7. Establish elevation benchmarks for all substructure formwork.
8. Check elevations at top of footing concrete line inside footing formwork immediately prior to concrete placement.
9. Check column location and pier centerline of bearing at top of footing immediately prior to concrete placement.
10. Establish location and plumbness of column forms, and monitor column plumbness during concrete placement.
11. Establish pier cap and crossbeam top and bottom elevations and centerline of bearing.
12. Check pier cap and crossbeam top and bottom elevations and centerline of bearing prior to and during concrete placement.
13. Establish grout pad locations and elevations.
14. Establish structure bearing locations and elevations, including locations of anchor bolt assemblies.
15. Establish box girder bottom slab grades and locations.

16. Establish girder and/or web wall profiles and locations.
17. Establish diaphragm locations and centerline of bearing.
18. Establish roadway slab alignment, grades and provide dimensions from top of girder to top of roadway slab. Set elevations for deck paving machine rails.
19. Establish traffic barrier and curb profile.
20. Profile all girders prior to the placement of any deadload or construction live load that may affect the girder's profile.

The Contractor shall provide the Contracting Agency copies of any calculations and staking data when requested by the Engineer.

The Contractor shall submit the computed elevations at the top of bridge decks as a Type 2 Working Drawing. The elevations shall be computed at tenth points along the centerline of each girder web.

The Contractor shall ensure a surveying accuracy within the following tolerances:

1. Stationing on structures	<u>Vertical</u>	<u>Horizontal</u>
2. Alignment on structures		±0.02 feet
3. Superstructure elevations	±0.01 feet variation from plan elevation	±0.02 feet
4. Substructure	<u>Vertical</u>	<u>Horizontal</u>
	±0.02 feet variation from Plan grades.	

The Contracting Agency may spot-check the Contractor's surveying. These spot-checks will not change the requirements for normal checking by the Contractor.

When staking the following items, the Contractor shall perform independent checks from different secondary control to ensure that the points staked for these items are within the specified survey accuracy tolerances:

Piles
Shafts
Footings
Columns

The Contractor shall calculate coordinates for the points associated with piles, shafts, footings and columns. The Contracting Agency will verify these coordinates prior to issuing approval to the Contractor for commencing with the survey work. The Contracting Agency will require up to seven calendar days from the date the data is received to issuing approval.

Contract work to be performed using contractor-provided stakes shall not begin until the stakes are approved by the Contracting Agency. Such approval shall not relieve the Contractor of responsibility for the accuracy of the stakes.

Payment

Payment will be made for the following bid item when included in the proposal:

“Structure Surveying”, lump sum.

The lump sum contract price for “Structure Surveying” shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work specified, including any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts.

(January 13, 2021 WSDOT GSP, Option 2)

Contractor Surveying – Roadway

The Contracting Agency has provided primary survey control in the Plans.

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of the roadbed, drainage, surfacing, paving, channelization and pavement marking, illumination and signals, guardrails and barriers, and signing. Except for the survey control data to be furnished by the Contracting Agency, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor’s responsibility.

The Contractor shall inform the Engineer when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments. All monuments noted on the plans “DO NOT DISTURB” shall be protected throughout the length of the project or be replaced at the Contractors expense.

Detailed survey records shall be maintained, including a description of the work performed on each shift, the methods utilized, and the control points used. The record shall be adequate to allow the survey to be reproduced. A copy of each day’s record shall be provided to the Engineer within three working days after the end of the shift.

The meaning of words and terms used in this provision shall be as listed in “Definitions of Surveying and Associated Terms” current edition, published by the American Congress on Surveying and Mapping and the American Society of Civil Engineers.

The survey work shall include but not be limited to the following:

1. Verify the primary horizontal and vertical control furnished by the Contracting Agency, and expand into secondary control by adding stakes and hubs as well as additional survey control needed for the project. Provide descriptions of secondary control to the Contracting Agency. The description shall include coordinates and elevations of all secondary control points.

2. Establish, the centerlines of all alignments, by placing hubs, stakes, or marks on centerline or on offsets to centerline at all curve points (PCs, PTs, and PIs) and at points on the alignments spaced no further than 50 feet.
3. Establish clearing limits, placing stakes at all angle points and at intermediate points not more than 50 feet apart. The clearing and grubbing limits shall be 5 feet beyond the toe of a fill and 10 feet beyond the top of a cut unless otherwise shown in the Plans.
4. Establish grading limits, placing slope stakes at centerline increments not more than 50 feet apart. Establish offset reference to all slope stakes. If Global Positioning Satellite (GPS) Machine Controls are used to provide grade control, then slope stakes may be omitted at the discretion of the Contractor
5. Establish the horizontal and vertical location of all drainage features, placing offset stakes to all drainage structures and to pipes at a horizontal interval not greater than 25 feet.
6. Establish roadbed and surfacing elevations by placing stakes at the top of subgrade and at the top of each course of surfacing. Subgrade and surfacing stakes shall be set at horizontal intervals not greater than 50 feet in tangent sections, 25 feet in curve sections with a radius less than 300 feet, and at 10-foot intervals in intersection radii with a radius less than 10 feet. Transversely, stakes shall be placed at all locations where the roadway slope changes and at additional points such that the transverse spacing of stakes is not more than 12 feet. If GPS Machine Controls are used to provide grade control, then roadbed and surfacing stakes may be omitted at the discretion of the Contractor.
7. Establish intermediate elevation benchmarks as needed to check work throughout the project.
8. Provide references for paving pins at 25-foot intervals or provide simultaneous surveying to establish location and elevation of paving pins as they are being placed.
9. For all other types of construction included in this provision, (including but not limited to channelization and pavement marking, illumination and signals, guardrails and barriers, and signing) provide staking and layout as necessary to adequately locate, construct, and check the specific construction activity.
10. Contractor shall determine if changes are needed to the profiles or roadway sections shown in the Contract Plans in order to achieve proper smoothness and drainage where matching into existing features, such as a smooth transition from new pavement to existing pavement. The Contractor shall submit these changes to the Engineer for review and approval 10 days prior to the beginning of work.

The Contractor shall provide the Contracting Agency copies of any calculations and staking data when requested by the Engineer.

The Contractor shall ensure a surveying accuracy within the following tolerances:

	<u>Vertical</u>	<u>Horizontal</u>
Slope stakes	±0.10 feet	±0.10 feet
Subgrade grade stakes set 0.04 feet below grade	±0.01 feet	±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)
Stationing on roadway	N/A	±0.1 feet
Alignment on roadway	N/A	±0.04 feet
Surfacing grade stakes	±0.01 feet	±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)
	<u>Vertical</u>	<u>Horizontal</u>
Surfacing grade stakes	±0.01 feet	±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)
Roadway paving pins for surfacing or paving	±0.01 feet	±0.2 feet (parallel to alignment) ±0.1 feet (normal to alignment)

The Contracting Agency may spot-check the Contractor's surveying. These spot-checks will not change the requirements for normal checking by the Contractor.

When staking roadway alignment and stationing, the Contractor shall perform independent checks from different secondary control to ensure that the points staked are within the specified survey accuracy tolerances.

The Contractor shall calculate coordinates for the alignment. The Contracting Agency will verify these coordinates prior to issuing approval to the Contractor for commencing with the work. The Contracting Agency will require up to seven calendar days from the date the data is received.

Contract work to be performed using contractor-provided stakes shall not begin until the stakes are approved by the Contracting Agency. Such approval shall not relieve the Contractor of responsibility for the accuracy of the stakes.

Stakes shall be marked in accordance with Standard Plan A10.10. When stakes are needed that are not described in the Plans, then those stakes shall be marked, at no additional cost to the Contracting Agency as ordered by the Engineer.

Payment

Payment will be made for the following bid item when included in the proposal:

“Roadway Surveying”, lump sum.

The lump sum contract price for “Roadway Surveying” shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work specified, including any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts.

(April 4, 2021 WSDOT GSP, Option 3)

Licensed Surveyors

The Contractor shall be responsible for reestablishing or locating legal survey markers such as GLO monuments or property corner monuments, conduct boundary surveys to determine Contracting Agency right-of-way locations, and obtain, review and analyze deeds and records as necessary to determine these boundaries. The Contracting Agency will provide “rights of entry” as needed by the Contractor to perform the work.

The Contractor shall brush out or clear and stake or mark the right-of-way lines as designated by the Engineer.

The Contractor shall inform the Engineer when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments. All monuments noted on the plans “DO NOT DISTURB” shall be protected throughout the length of the project or be replaced at Contractors expense.

When required, the Contractor shall prepare and file a Record of Survey map in accordance with RCW 58.09 and provide a recorded copy to the Contracting Agency. The Contracting Agency will provide all existing base maps, existing horizontal and vertical control, and other material available with Washington State Plane Coordinate information to the Contractor. The Contracting Agency will also provide maps, plan sheets, and/or aerial photographs clearly identifying the limits of the areas to be surveyed. The Contractor shall establish Washington State Plane Coordinates on all points required in the Record of Survey and other points designated in the Contract documents.

Existing right of way documentation, existing base maps, existing horizontal and vertical control descriptions, maps, plan sheets, aerial photographs and all other available material may be viewed by prospective bidders at the office of the Engineer.

The Contractor shall perform all of the necessary calculations for the contracted survey work and shall provide copies of these calculations to the Contracting Agency. Electronic files of all survey data shall be provided and in a format acceptable to the Contracting Agency.

All survey work performed by the Contractor shall conform to all applicable sections of the Revised Code of Washington and the Washington Administrative Code.

The Contractor shall provide all traffic control, signing, and temporary traffic control devices in order to provide a safe work zone.

Payment

Payment will be made in accordance with Section 1-09.6 for the following bid item when included in the proposal:

“Licensed Surveying”, Force Account.

For the purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount for the item "Licensed Surveying" in the bid proposal to become a part of the total bid by the Contractor.

(April 2, 2018 WSDOT GSP, Option 4)

Contractor Surveying – ADA Features

ADA Feature Staking Requirements

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, and grades necessary for the construction of the ADA features. Calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility. The Contractor shall build the ADA features within the specifications in the Standard Plans and contract documents.

ADA Feature As-Built Measurements

The Contractor shall be responsible for providing electronic As-Built records of all ADA feature improvements completed in the Contract.

The survey work shall include but not be limited to completing the measurements, recording the required measurements and completing other data fill-ins found on the ADA Measurement Forms, and transmitting the electronic Forms to the Engineer. The ADA Measurement Forms are found at the following website location:

<http://www.wsdot.wa.gov/Design/ADAGuidance.htm>

In the instance where an ADA Feature does not meet accessibility requirements, all work to replace non-conforming work and then to measure, record the as-built measurements, and transmit the electronic Forms to the Engineer shall be completed at no additional cost to the Contracting Agency, as ordered by the Engineer.

Payment

Payment will be made for the following bid item that is included in the Proposal:

"ADA Features Surveying", lump sum.

The unit Contract price per lump sum for "ADA Features Surveying" shall be full pay for all the Work as specified.

1-05.7 Removal of Defective and Unauthorized Work
(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

1-05.8 Vacant

Section 1-05.8, including title, is replaced with the following:

1-05.8 Notification
(June 1, 2020, Lynnwood GSP)

New Section

The Contractor shall notify the Lynnwood Police Department, South County Fire and Rescue, and Resident Engineer in writing at least 48 hours prior to:

1. Implementation of any detours or lane closures;
2. Commencing work on any water systems shut downs, inoperable fire hydrants; or
3. Shutdowns affecting traffic signals and pre-emption equipment.

Notice shall be provided to these departments so that they may reroute their emergency vehicles around or within the construction zone. If rerouting is not possible as determined by the South County Fire and Rescue and/or Lynnwood Police Department, the Contractor shall provide access through the construction zone at all times with no reduction in emergency service response times.

If affected, the Contractor shall notify the U. S. Postal Service, Edmonds School District #15, Edmonds College and Community Transit/Sound transit at least forty-eight (48) hours prior to traffic disruptions or route detours.

Affected residences and businesses shall be notified as follows:

1. Initial notification shall be provided to residents and businesses providing the Contractor's intended construction schedule and potential traffic delays or property access and/or service disruptions. This notification shall precede the work a minimum of seven (7) days. Wording of the initial notice shall be approved by the Contracting Agency prior to it being distributed.
2. Final notification shall be provided to residents and businesses providing the Contractor's exact construction schedule and nature of the disruption. This notification shall be provided a minimum of twenty-four (24) hours prior to the first day residents/businesses will be requested to clear vehicles from the construction area and/or any disruption to property access or services.

Work performed under this section shall be considered incidental to the contract.

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing *(October 1, 2005 APWA GSP)*

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefor.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized

interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.13 Superintendents, Labor, and Equipment Of Contractor
(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.14 Cooperation With Other Contractors
(March 13, 1995 WSDOT GSP, Option 1)

Section 1-05.14 is supplemented with the following:

Other Contracts Or Other Work

It is anticipated that the following work adjacent to or within the limits of this project will be performed by others during the course of this project and will require coordination of the work:

*** Relocation of wood light poles, utility poles, existing conduits, vaults, handholes and associated infrastructure by Snohomish County PUD.

Lynnwood Link Extension L300 around Lynnwood Transit Center Park & Ride for 48th Ave W roadway construction by Sound Transit

Lynnwood Link Extension L350 around 200th St SW from 48th Ave W to 44th Ave W for roadway and intersections construction by Sound Transit ***

(*****)

The Contractor shall coordinate with other Contractors of public utilities who will work within the project vicinity and shall be responsible to ensure other Contractors perform their work in accordance to ND PES permit requirements.

The Contractor shall coordinate with Sound Transit Contractor who will work near the project vicinity and shall be responsible to ensure that the project traffic control measures do not conflict with the Sound Transit Contractor's traffic control measures. .

Add the following new sections:

1-05.16 Water and Power
(October 1, 2005 APWA GSP)

New Section

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the Contract includes power and water as a pay item.

1-05.18 Record Drawings
(March 8, 2013 APWA GSP)

New Section

The Contractor shall maintain one set of full size plans for Record Drawings, updated with clear and accurate red-lined field revisions on a daily basis, and within 2 business days after receipt of information that a change in Work has occurred. The Contractor shall not conceal any work until the required information is recorded.

This Record Drawing set shall be used for this purpose alone, shall be kept separate from other Plan sheets, and shall be clearly marked as Record Drawings. These Record Drawings shall be kept on site at the Contractor's field office, and shall be available for review by the Contracting Agency at all times. The Contractor shall bring the Record Drawings to each progress meeting for review.

The preparation and upkeep of the Record Drawings is to be the assigned responsibility of a single, experienced, and qualified individual. The quality of the Record Drawings, in terms of accuracy, clarity, and completeness, is to be adequate to allow the Contracting Agency to modify the computer-aided drafting (CAD) Contract Drawings to produce a complete set of Record Drawings for the Contracting Agency without further investigative effort by the Contracting Agency.

The Record Drawing markups shall document all changes in the Work, both concealed and visible. Items that must be shown on the markups include but are not limited to:

- Actual dimensions, arrangement, and materials used when different than shown in the Plans.
- Changes made by Change Order or Field Order.
- Changes made by the Contractor.
- Accurate locations of storm sewer, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

If the Contract calls for the Contracting Agency to do all surveying and staking, the Contracting Agency will provide the elevations at the tolerances the Contracting Agency requires for the Record Drawings.

When the Contract calls for the Contractor to do the surveying/staking, the applicable tolerance limits include, but are not limited to the following:

	Vertical	Horizontal
As-built sanitary & storm invert and grate elevations	± 0.01 foot	± 0.01 foot
As-built monumentation	± 0.001 foot	± 0.001 foot
As-built waterlines, inverts, valves, hydrants	± 0.10 foot	± 0.10 foot
As-built ponds/swales/water features	± 0.10 foot	± 0.10 foot
As-built buildings (fin. Floor elev.)	± 0.01 foot	± 0.10 foot
As-built gas lines, power, TV, Tel, Com	± 0.10 foot	± 0.10 foot
As-built signs, signals, etc.	N/A	± 0.10 foot

Making Entries on the Record Drawings:

- Use erasable colored pencil (not ink) for all markings on the Record Drawings, conforming to the following color code:
 - Additions - Red
 - Deletions - Green
 - Comments - Blue
 - Dimensions - Graphite
- Provide the applicable reference for all entries, such as the change order number, the request for information (RFI) number, or the approved shop drawing number.
- Date all entries.
- Clearly identify all items in the entry with notes similar to those in the Contract Drawings (such as pipe symbols, centerline elevations, materials, pipe joint abbreviations, etc.).

The Contractor shall certify on the Record Drawings that said drawings are an accurate depiction of built conditions, and in conformance with the requirements detailed above. The Contractor shall submit final Record Drawings to the Contracting Agency. Contracting Agency acceptance of the Record Drawings is one of the requirements for achieving Physical Completion.

Payment will be made for the following bid item:

Record Drawings (Minimum Bid \$ ***\$5,000***)	Lump Sum
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Payment for this item will be made on a prorated monthly basis for work completed in accordance with this section up to 75% of the lump sum bid. The final 25% of the lump sum item will be paid upon submittal and approval of the completed Record Drawings set prepared in conformance with these Special Provisions.

A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor must bid at least that amount.

1-06 CONTROL OF MATERIAL
(August 6, 2012 WSDOT GSP)

Section 1-06 is supplemented with the following:

Buy America

In accordance with Buy America requirements contained in 23 CFR 635.410, the major quantities of steel and iron construction material that is permanently incorporated into the project shall consist of American-made materials only. Buy America does not apply to temporary steel items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework.

Minor amounts of foreign steel and iron may be utilized in this project provided the cost of the foreign material used does not exceed one-tenth of one percent of the total contract cost or \$2,500.00, whichever is greater.

American-made material is defined as material having all manufacturing processes occurring domestically. To further define the coverage, a domestic product is a manufactured steel material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States.

If domestically produced steel billets or iron ingots are exported outside of the area of coverage, as defined above, for any manufacturing process then the resulting product does not conform to the Buy America requirements. Additionally, products manufactured domestically from foreign source steel billets or iron ingots do not conform to the Buy America requirements because the initial melting and mixing of alloys to create the material occurred in a foreign country.

Manufacturing begins with the initial melting and mixing, and continues through the coating stage. Any process which modifies the chemical content, the physical size or shape, or the final finish is considered a manufacturing process. The processes include rolling, extruding, machining, bending, grinding, drilling, welding, and coating. The action of applying a coating to steel or iron is deemed a manufacturing process. Coating includes epoxy coating, galvanizing, aluminizing, painting, and any other coating that protects or enhances the value of steel or iron. Any process from the original reduction from ore to the finished product constitutes a manufacturing process for iron.

Due to a nationwide waiver, Buy America does not apply to raw materials (iron ore and alloys), scrap (recycled steel or iron), and pig iron or processed, pelletized, and reduced iron ore.

The following are considered to be steel manufacturing processes:

1. Production of steel by any of the following processes:
 - a. Open hearth furnace.
 - b. Basic oxygen.
 - c. Electric furnace.
 - d. Direct reduction.
2. Rolling, heat treating, and any other similar processing.
3. Fabrication of the products.
 - a. Spinning wire into cable or strand.
 - b. Corrugating and rolling into culverts.
 - c. Shop fabrication.

A certification of materials origin will be required for any items comprised of, or containing, steel or iron construction materials prior to such items being incorporated into the permanent work. The certification shall be on DOT Form 350-109EF provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as DOT Form 350-109EF.

1-06.6 Recycled Materials

(January 4, 2016 APWA GSP)

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)

The following is added at the end of this section:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to

conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

Add the following new section:

1-07.1(6) Noise Control and Work Performed at Night
(October 5, 2021, Lynnwood GSP)

New Section

The contractor shall take all reasonable measures for the suppression of noise resulting from work operations between the hours of 10:00 PM and 7:00 AM on week days and, when permitted, 10:00 PM and 9:00 AM on weekends and legal holidays when working in, or adjacent to, Class A Environmental Designation for Noise Abatement (EDNA) areas as defined in Chapter 10.12, Lynnwood Municipal Code. Mobile engine-driven cranes, loaders and similar material handling equipment; engines used in stationary service for stand-by power; air compressors for high- and low-pressure service; and other similar equipment shall be equipped with exhaust and air intake silencers designated for use in critical noise problem areas.

In addition to the above requirements, as a measure to mitigate noise received on residential properties, the Contractor shall submit for approval by the Engineer, at or prior to the pre-construction meeting, the measures they propose to implement to reduce nighttime construction noise. Among these may be:

1. All dump trucks hauling granular material to and/or from the site to have truck beds lined with sound deadening material;
2. Compression brakes will not be used;
3. All backup warning devices to be broadband (white noise) or strobe types, or the Contractor may use a backup observer (cannot be a flagger) in lieu of backup warning devices as allowed by WAC 296-155-610;
4. Lighting equipment to be directed away from oncoming traffic and residences and will be shielded as deemed necessary by the Engineer. Lighting that diffuses the light, reduces the glare, and can be directionally controlled is encouraged.
5. When equipment selection options are available to the Contractor, the Contractor is encouraged to select newer, better maintained pieces of equipment with the more effective noise suppression devices installed.
6. Equipment such as generators, air compressors, and any other similar stationary machinery provided with approved noise mitigation shielding or portable blankets/aprons;
7. The operation of portable hand or power tools, blowers or machinery which results in unreasonably loud and disturbing noise to use approved mitigation shields and shall operate no closer than 500 feet from the receiving residential property;
8. Intermittently used equipment will not be left idling for more than five (5) minutes;

9. Pneumatic tools will have intake and exhaust mufflers, electrically driven tools are preferred;
10. To the greatest extent possible, impact work, such as pile driving, jack hammering, hoe rams, hoe compactors, sawcutting, etc., will not be conducted during nighttime hours from 10:00 PM to 7:00 AM on weekdays and 10:00 PM to 9:00 AM on weekends and legal holidays.

Work performed under this section shall be considered incidental to the contract.

1-07.2 State Taxes

Delete this section, including its sub-sections, in its entirety and replace it with the following:

1-07.2 State Sales Tax *(June 27, 2011 APWA GSP)*

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.5 Environmental Regulations

Section 1-07.5 is supplemented with the following:

(September 20, 2010 WSDOT GSP, Option 1)

Environmental Commitments

The following Provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Contracting Agency by the various documents referenced in the Special Provision Permits and Licenses. Throughout the work, the Contractor shall comply with the following requirements:

(April 1, 2019 WSDOT GSP, Option 1B)

The Contractor shall notify the Engineer a minimum of *** 15 *** calendar days prior to commencing any work in sensitive areas, mitigation areas, and wetland buffers. Installation of construction fencing is excluded from this notice requirement.

(*****)

The intentional bypass of stormwater from all or any portion of a stormwater treatment system is prohibited without the approval of the Engineer.

Heavy equipment working in wetlands or mudflats must be placed on mats or other measures taken to minimize soil disturbance as approved by the Engineer.

(August 3, 2009 WSDOT GSP, Option 2)

Payment

All costs to comply with this special provision for the environmental commitments and requirements are incidental to the contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the contract.

1-07.6 Permits and Licenses

(January 2, 2018 WSDOT GSP, Option 1)

Section 1-07.6 is supplemented with the following:

The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer with the exception of when the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved.

*** Temporary Construction Easements

State Environmental Policy Act (SEPA)

National Environmental Policy Act (NEPA)

Cultural Resources (Part of NEPA)

Hydraulic Project Approval (2021-4-381+01)

Nationwide Permit 14 from US Army Corps of Engineers DOE Construction Stormwater General Permit (CSWGP) ***

Add the following new section:

1-07.6(1) Local Permits and Licenses
(April 8, 2019, Lynnwood GSP)

New Section

The Contracting Agency has applied and paid for the following permits in conjunction with this project. The Contractor shall be responsible for picking up these permits at the Lynnwood Permit Center, 20816 44th Ave W, Suite 230. A Washington State Contractors license and City of Lynnwood Business License are required before local permits will be issued by City of Lynnwood.

*** Building (BLDC-028203-2021)

Critical Areas (CAP-028206-2021)

Clearing (CLR-028205-2021)

Grading (GRD-028207-2021) ***

It is the Contractor's responsibility to apply and pay for the following permits which have been identified as required for this project. The Contractor shall also be responsible to apply and pay for any other unidentified permits which may be required. All costs to obtain and comply with these permits shall be included in the applicable Bid items for the work involved.

*** City Hydrant Use

City Limited Discharge (Sanitary Sewer System)

City of Lynnwood Saturday Work Permit/Noise, Weekend, after hours permit ***

1-07.7 Load Limits

Section 1-07.7 is supplemented with the following

(March 13, 1995 WSDOT GSP, Option 6)

If the sources of materials provided by the Contractor necessitates hauling over roads other than State Highways, the Contractor shall, at the Contractor's expense, make all arrangements for the use of the haul routes.

1-07.9 Wages

1-07.9(1) General
(January 13, 2021 WSDOT GSP, Option 1)

The Federal wage rates incorporated in this contract have been established by the Secretary of Labor under United States Department of Labor General Decision No. WA20210001.

The State rates incorporated in this contract are applicable to all construction activities associated with this contract.

1-07.9(5) Required Documents
(January 3, 2020 APWA GSP)

This section is deleted and replaced with the following:

General

All “Statements of Intent to Pay Prevailing Wages”, “Affidavits of Wages Paid” and Certified Payrolls, including a signed Statement of Compliance for Federal-aid projects, shall be submitted to the Engineer and the State L&I online Prevailing Wage Intent & Affidavit (PWIA) system.

Intents and Affidavits

On forms provided by the Industrial Statistician of State L&I, the Contractor shall submit to the Engineer the following for themselves and for each firm covered under RCW 39.12 that will or has provided Work and materials for the Contract:

1. The approved “Statement of Intent to Pay Prevailing Wages” State L&I’s form number F700-029-000. The Contracting Agency will make no payment under this Contract until this statement has been approved by State L&I and reviewed by the Engineer.
2. The approved “Affidavit of Prevailing Wages Paid”, State L&I’s form number F700-007-000. The Contracting Agency will not grant Completion until all approved Affidavit of Wages paid for the Contractor and all Subcontractors have been received by the Engineer. The Contracting Agency will not release to the Contractor any funds retained under RCW 60.28.011 until “Affidavit of Prevailing Wages Paid” forms have been approved by State L&I and all of the approved forms have been submitted to the Engineer for every firm that worked on the Contract.

The Contractor is responsible for requesting these forms from State L&I and for paying any fees required by State L&I.

Certified Payrolls

Certified payrolls are required to be submitted by the Contractor for themselves, all Subcontractors and all lower tier subcontractors. The payrolls shall be submitted weekly on all Federal-aid projects and no less than monthly on State funded projects.

Penalties for Noncompliance

The Contractor is advised, if these payrolls are not supplied within the prescribed deadlines, any or all payments may be withheld until compliance is achieved. In addition, failure to provide these payrolls may result in other sanctions as provided by State laws (RCW 39.12.050) and/or Federal regulations (29 CFR 5.12).

1-07.11 Requirements for Nondiscrimination
(September 3, 2019 WSDOT GSP, Option 1)

Section 1-07.11 is supplemented with the following:

Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Contractor's attention is called to the Equal Opportunity Clause and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth herein.
2. The goals and timetables for minority and female participation set by the Office of Federal Contract Compliance Programs, expressed in percentage terms for the Contractor's aggregate work force in each construction craft and in each trade on all construction work in the covered area, are as follows:

Women - Statewide

Timetable	Goal
Until further notice	6.9%

Minorities - by Standard Metropolitan Statistical Area (SMSA)

Spokane, WA:

SMSA Counties:

Spokane, WA WA Spokane.	2.8
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Non-SMSA Counties	3.0
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WA Adams; WA Asotin; WA Columbia; WA Ferry; WA Garfield; WA Lincoln,
 WA Pend Oreille; WA Stevens; WA Whitman.

Richland, WA

SMSA Counties:

Richland Kennewick, WA WA Benton; WA Franklin.	5.4
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Non-SMSA Counties	3.6
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WA Walla Walla.

Yakima, WA:

SMSA Counties:

Yakima, WA WA Yakima.	9.7
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Non-SMSA Counties	7.2
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WA Chelan; WA Douglas; WA Grant; WA Kittitas; WA Okanogan.

Seattle, WA:	
SMSA Counties:	
Seattle Everett, WA	7.2
WA King; WA Snohomish.	
Tacoma, WA	6.2
WA Pierce.	
Non-SMSA Counties	6.1
WA Clallam; WA Grays Harbor; WA Island; WA Jefferson; WA Kitsap; WA Lewis; WA Mason; WA Pacific; WA San Juan; WA Skagit; WA Thurston; WA Whatcom.	
Portland, OR:	
SMSA Counties:	
Portland, OR-WA	4.5
WA Clark.	
Non-SMSA Counties	3.8
WA Cowlitz; WA Klickitat; WA Skamania; WA Wahkiakum.	

These goals are applicable to each nonexempt Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, or federally assisted project, contract, or subcontract until further notice. Compliance with these goals and time tables is enforced by the Office of Federal Contract compliance Programs.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, in each construction craft and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goal shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of \$10,000 or more that are Federally funded, at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed. The notification shall be sent to:

U.S. Department of Labor
Office of Federal Contract Compliance Programs Pacific Region
Attn: Regional Director
San Francisco Federal Building
90 – 7th Street, Suite 18-300
San Francisco, CA 94103(415) 625-7800 Phone
(415) 625-7799 Fax

4. As used in this Notice, and in the contract resulting from this solicitation, the Covered Area is as designated herein.

Standard Federal Equal Employment Opportunity Construction Contract Specifications
(Executive Order 11246)

1. As used in these specifications:

- a. Covered Area means the geographical area described in the solicitation from which this contract resulted;
- b. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. Employer Identification Number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941;
- d. Minority includes:
 - (1) Black, a person having origins in any of the Black Racial Groups of Africa.
 - (2) Hispanic, a fluent Spanish speaking, Spanish surnamed person of Mexican, Puerto Rican, Cuban, Central American, South American, or other Spanish origin.
 - (3) Asian or Pacific Islander, a person having origins in any of the original peoples of the Pacific rim or the Pacific Islands, the Hawaiian Islands and Samoa.
 - (4) American Indian or Alaskan Native, a person having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall

good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith effort to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of this Special Provision. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was

taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunity and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the U.S. Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations

such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of the obligations under 7a through 7p of this Special Provision provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensure that the concrete benefits of the program are reflected in the Contractor's minority and female work-force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrate the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both

minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, terminations and cancellations of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of this Special Provision, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include, for each employee, their name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, the Contractors will not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
16. Additional assistance for Federal Construction Contractors on contracts administered by Washington State Department of Transportation or by Local Agencies may be found at:

Washington State Dept. of Transportation
Office of Equal Opportunity
PO Box 47314
310 Maple Park Ave. SE
Olympia WA
98504-7314
Ph: 360-705-7090
Fax: 360-705-6801
<http://www.wsdot.wa.gov/equalopportunity/default.htm>

(October 1, 2020 APWA GSP, Option B)

Supplement this section with the following:

Disadvantaged Business Enterprise Participation

The Disadvantaged Business Enterprise (DBE) requirements of 49 CFR Part 26 and USDOT's official interpretations (i.e., Questions & Answers) apply to this Contract. Demonstrating compliance with these Specifications is a Condition of Award (COA) of this Contract. Failure to comply with the requirements of this Specification may result in your Bid being found to be nonresponsive resulting in rejection or other sanctions as provided by Contract.

DBE Abbreviations and Definitions

Broker – A business firm that provides a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for the performance of the Contract; or, persons/companies who arrange or expedite transactions.

Certified Business Description – Specific descriptions of work the DBE is certified to perform, as identified in the Certified Firm Directory, under the Vendor Information page.

Certified Firm Directory – A database of all Minority, Women, and Disadvantaged Business Enterprises currently certified by Washington State. The on-line Directory is available to Bidders for their use in identifying and soliciting interest from DBE firms. The database is located under the Firm Certification section of the Diversity Management and Compliance System web page at: <https://omwbe.diversitycompliance.com>.

Commercially Useful Function (CUF) – 49 CFR 26.55(c)(1) defines commercially useful function as: *“A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, you must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.”*

Disadvantaged Business Enterprise (DBE) – A business firm certified by the Washington State Office of Minority and Women’s Business Enterprises, as meeting the criteria outlined in 49 CFR 26 regarding DBE certification.

Force Account Work – Work measured and paid in accordance with Section 1-09.6.

Good Faith Efforts – Efforts to achieve the DBE COA Goal or other requirements of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

Manufacturer (DBE) – A DBE firm that operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the Contract. A DBE Manufacturer shall produce finished goods or products from raw or unfinished material or purchase and substantially alters goods and materials to make them suitable for construction use before reselling them.

Reasonable Fee (DBE) – For purposes of Brokers or service providers a reasonable fee shall not exceed 5% of the total cost of the goods or services brokered.

Regular Dealer (DBE) – A DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of a Contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a Regular Dealer, the DBE firm must be an established regular business that engages in as its principal business and in its own name the purchase and sale of the products in question. A Regular Dealer in such items as steel, cement, gravel, stone, and petroleum products need not own, operate or maintain a place of business if it both owns and operates distribution equipment for the products. Any supplementing of regular dealers’ own distribution equipment shall be by long-term formal lease agreements and not on an ad-hoc basis. Brokers, packagers, manufacturers’ representatives, or other persons who arrange or expedite transactions shall not be regarded as Regular Dealers within the meaning of this definition.

DBE Commitment – The scope of work and dollar amount the Bidder indicates they will be subcontracting to be applied towards the DBE Condition of Award Goal as shown on the DBE Utilization Certification Form for each DBE Subcontractor. This DBE Commitment amount will be incorporated into the Contract and shall be considered a Contract requirement. The Contractor shall utilize the COA DBEs to perform the work and supply the materials for which they are committed. Any changes to the DBE Commitment require the Engineer’s prior written approval.

DBE Condition of Award (COA) Goal – An assigned numerical amount specified as a percentage of the Contract. Initially, this is the minimum amount that the Bidder must commit to by submission of the Utilization Certification Form and/or by Good Faith Effort (GFE).

DBE COA Goal

The Contracting Agency has established a DBE COA Goal for this Contract in the amount of: *** 8% ***

Crediting DBE Participation

Subcontractors proposed as COA must be certified prior to the due date for bids on the Contract. All non-COA DBE Subcontractors shall be certified before the subcontract on which they are participating is executed.

DBE participation is only credited upon payment to the DBE.

The following are some definitions of what may be counted as DBE participation.

DBE Prime Contractor

Only take credit for that portion of the total dollar value of the Contract equal to the distinct, clearly defined portion of the Work that the DBE Prime Contractor performs with its own forces and is certified to perform.

DBE Subcontractor

Only take credit for that portion of the total dollar value of the subcontract that is equal to the distinct, clearly defined portion of the Work that the DBE performs with its own forces and is certified to perform. The value of work performed by the DBE includes the cost of supplies and materials purchased by the DBE and equipment leased by the DBE, for its work on the contract. Supplies, materials or equipment obtained by a DBE that are not utilized or incorporated in the contract work by the DBE will not be eligible for DBE credit.

The supplies, materials, and equipment purchased or leased from the Contractor or its affiliate, including any Contractor's resources available to DBE subcontractors at no cost, shall not be credited.

DBE credit will not be given in instances where the equipment lease includes the operator. The DBE is expected to operate the equipment used in the performance of its work under the contract with its own forces. Situations where equipment is leased and used by the DBE, but payment is deducted from the Contractor's payment to the DBE is not allowed.

When the subcontractor is part of a DBE Commitment, the following apply:

1. If a DBE subcontracts a portion of the Work of its contract to another firm, the value of the subcontracted Work may be counted toward the DBE COA Goal only if the Lower-Tier Subcontractor is also a DBE.
2. Work subcontracted to a Lower-Tier Subcontractor that is a DBE, may be counted toward the DBE COA Goal.
3. Work subcontracted to a non-DBE does not count towards the DBE COA Goal.

DBE Subcontract and Lower Tier Subcontract Documents

There must be a subcontract agreement that complies with 49 CFR Part 26 and fully describes the distinct elements of Work committed to be performed by the DBE.

DBE Service Provider

The value of fees or commissions charged by a DBE firm behaving in a manner of a Broker, or another service provider for providing a bona fide service, such as professional, technical, consultant, managerial services, or for providing bonds or

insurance specifically required for the performance of the contract will only be credited as DBE participation, if the fee/commission is determined by the Contracting Agency to be reasonable and the firm has performed a CUF.

Force Account Work

When the Bidder elects to utilize force account Work to meet the DBE COA Goal, as demonstrated by listing this force account Work on the DBE Utilization Certification Form, for the purposes of meeting the DBE COA Goal, only 50% of the Proposal amount shall be credited toward the Bidder's Commitment to meet the DBE COA Goal.

One hundred percent of the actual amounts paid to the DBE for the force account Work shall be credited towards the DBE COA Goal or DBE participation.

Temporary Traffic Control

If the DBE firm only provides "Flagging", the DBE firm must provide a Traffic Control Supervisor (TCS) and flagger, which are under the direct control of the DBE. The DBE firm shall also provide all flagging equipment for its employees (e.g. paddles, hard hats, and vests).

If the DBE firm provides "Traffic Control Services", the DBE firm must provide a TCS, flaggers, and traffic control items (e.g., cones, barrels, signs, etc.) and be in total control of all items in implementing the traffic control for the project.

Trucking

DBE trucking firm participation may only be credited as DBE participation for the value of the hauling services, not for the materials being hauled unless the trucking firm is also certified as a supplier of those materials. In situations where the DBE's work is priced per ton, the value of the hauling service must be calculated separately from the value of the materials in order to determine DBE credit for hauling

The DBE trucking firm must own and operate at least one licensed, insured and operational truck on the contract. The truck must be of the type that is necessary to perform the hauling duties required under the contract. The DBE receives credit for the value of the transportation services it provides on the Contract using trucks it owns or leases, licenses, insures, and operates with drivers it employs.

The DBE may lease additional trucks from another DBE firm. The DBE who leases additional trucks from another DBE firm receives credit for the value of the transportation services the lessee DBE provides on the Contract.

The trucking Work subcontracted to any non-DBE trucking firm will not receive credit for Work done on the project.

The DBE may lease trucks from a truck leasing company (recognized truck rental center), but can only receive credit towards DBE participation if the DBE uses its own employees as drivers.

DBE Manufacturer and DBE Regular Dealer

One hundred percent (100%) of the cost of the manufactured product obtained from a DBE manufacturer may count towards the DBE COA Goal.

Sixty percent (60%) of the cost of materials or supplies purchased from a DBE Regular Dealer may be credited towards the DBE Goal. If the role of the DBE Regular Dealer is determined to be that of a Broker, then DBE credit shall be limited to the fee or commission it receives for its services. Regular Dealer status and the amount of credit is determined on a Contract-by-Contract basis.

DBE firms proposed to be used as a Regular Dealer must be approved before being listed as a COA/used on a project. The WSDOT Approved Regular Dealer list published on WSDOT's Office of Equal Opportunity (OEO) web site must include the specific project for which approval is being requested. For purposes of the DBE COA Goal participation, the Regular Dealer must submit the Regular Dealer Status Request form a minimum of five calendar days prior to bid opening.

Purchase of materials or supplies from a DBE which is neither a manufacturer nor a regular dealer, (i.e. Broker) only the fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, may count towards the DBE COA Goal provided the fees are not excessive as compared with fees customarily allowed for similar services. Documentation will be required to support the fee/commission charged by the DBE. The cost of the materials and supplies themselves cannot be counted toward the DBE COA Goal.

Note: Requests to be listed as a Regular Dealer will only be processed if the requesting firm is a material supplier certified by the Office of Minority and Women's Business Enterprises in a NAICS code that falls within the 42XXXX NAICS Wholesale code section.

Disadvantaged Business Enterprise Utilization

To be eligible for award of the Contract, the Bidder shall properly complete and submit a Disadvantaged Business Enterprise (DBE) Utilization Certification with the Bidder's sealed Bid Proposal, as specified in Section 1-02.9 Delivery of Proposal. The Bidder's DBE Utilization Certification must clearly demonstrate how the Bidder intends to meet the DBE COA Goal. A DBE Utilization Certification (WSDOT Form 272-056) is included in the Proposal package for this purpose as well as instructions on how to properly fill out the form.

The Bidder is advised that the items listed below when listed in the Utilization Certification must have their amounts reduced to the percentages shown and those reduced amounts will be the amount applied towards meeting the DBE COA Goal.

- Force account at 50%
- Regular dealer at 60%

In the event of arithmetic errors in completing the DBE Utilization Certification, the amount listed to be applied towards the DBE COA Goal for each DBE shall govern and the DBE total amount shall be adjusted accordingly.

Note: The Contracting Agency shall consider as non-responsive and shall reject any Bid Proposal submitted that does not contain a DBE Utilization Certification Form that accurately demonstrates how the Bidder intends to meet the DBE COA Goal.

Disadvantaged Business Enterprise Written Confirmation Document(s)

The Bidder shall submit an Disadvantaged Business Enterprise (DBE) Written Confirmation Document (completed and signed by the DBE) for each DBE firm listed in the Bidder's completed DBE Utilization Certification submitted with the Bid. Failure to do so will result in the associated participation being disallowed, which may cause the Bid to be determined to be nonresponsive resulting in Bid rejection.

The Confirmation Documents provide confirmation from the DBEs that they are participating in the Contract as provided in the Bidder's Commitment. The Confirmation Documents must be consistent with the Utilization Certification.

A DBE Written Confirmation Document (WSDOT Form 422-031) is included in the Proposal package for this purpose.

The form(s) shall be received as specified in the special provisions for Section 1-02.9 Delivery of Proposal.

It is prohibited for the Bidder to require a DBE to submit a Written Confirmation Document with any part of the form left blank. Should the Contracting Agency determine that an incomplete Written Confirmation Document was signed by a DBE, the validity of the document comes into question. The associated DBE participation may not receive credit.

Selection of Successful Bidder/Good Faith Efforts (GFE)

The successful Bidder shall be selected on the basis of having submitted the lowest responsive Bid, which demonstrates a good faith effort to achieve the DBE COA Goal. The Contracting Agency, at any time during the selection process, may request a breakdown of the bid items and amounts that are counted towards the overall contract goal for any of the DBEs listed on the DBE Utilization Certification.

Achieving the DBE COA Goal may be accomplished in one of two ways:

1. By meeting the DBE COA Goal
Submission of the DBE Utilization Certification, supporting DBE Written Confirmation Document(s) showing the Bidder has obtained enough DBE participation to meet or exceed the DBE COA Goal, the DBE Bid Item Breakdown and the DBE Trucking Credit Form, if applicable.
2. By documentation that the Bidder made adequate GFE to meet the DBE COA Goal
The Bidder may demonstrate a GFE in whole or part through GFE documentation ONLY IN THE EVENT a Bidder's efforts to solicit sufficient DBE participation have been unsuccessful. The Bidder must supply GFE documentation in addition to the DBE Utilization Certification, supporting DBE Written Confirmation Document(s), the DBE Bid Item Breakdown form and the DBE Trucking Credit Form, if applicable.

Note: In the case where a Bidder is awarded the contract based on demonstrating adequate GFE, the advertised DBE COA Goal will not be reduced. The Bidder shall demonstrate a GFE during the life of the Contract to attain the advertised DBE COA Goal.

GFE documentation, the DBE Bid Item Breakdown form, and the DBE Trucking Credit Form, if applicable, shall be submitted as specified in Section 1-02.9.

The Contracting Agency will review the GFE documentation and will determine if the Bidder made an adequate good faith effort.

Good Faith Effort (GFE) Documentation

GFE is evaluated when:

1. Determining award of a Contract that has COA goal,
2. When a COA DBE is terminated and substitution is required, and
3. Prior to Physical Completion when determining whether the Contractor has satisfied its DBE commitments.

49 CFR Part 26, Appendix A is intended as general guidance and does not, in itself, demonstrate adequate good faith efforts. The following is a list of types of actions, which would be considered as part of the Bidder's GFE to achieve DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

1. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the Work of the Contract. The Bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The Bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
2. Selecting portions of the Work to be performed by DBEs in order to increase the likelihood that the DBE COA Goal will be achieved. This includes, where appropriate, breaking out contract Work items into economically feasible units to facilitate DBE participation, even when the Bidder might otherwise prefer to perform these Work items with its own forces.
3. Providing interested DBEs with adequate information about the Plans, Specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation.
 - a. Negotiating in good faith with interested DBEs. It is the Bidder's responsibility to make a portion of the Work available to DBE subcontractors and suppliers and to select those portions of the Work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the Plans and Specifications for the Work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the Work.

- b. A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as the DBE COA Goal into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a Bidder's failure to meet the DBE COA Goal, as long as such costs are reasonable. Also, the ability or desire of a Bidder to perform the Work of a Contract with its own organization does not relieve the Bidder of the responsibility to make Good Faith Efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
4. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Bidder's efforts to meet the DBE COA Goal.
5. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Bidder.
6. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
7. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
8. Documentation of GFE must include copies of each DBE and non-DBE subcontractor quotes submitted to the Bidder when a non-DBE subcontractor is selected over a DBE for Work on the Contract. (ref. updated DBE regulations – 26.53(b)(2)(vi) & App. A)

Administrative Reconsideration of GFE Documentation

A Bidder has the right to request reconsideration if the GFE documentation submitted with their Bid was determined to be inadequate.

- The Bidder must request within 48 hours of notification of being nonresponsive or forfeit the right to reconsideration.
- The reconsideration decision on the adequacy of the Bidder's GFE documentation shall be made by an official who did not take part in the original determination.
- Only original GFE documentation submitted as a supplement to the Bid shall be considered. The Bidder shall not introduce new documentation at the reconsideration hearing.
- The Bidder shall have the opportunity to meet in person with the official for the purpose of setting forth the Bidder's position as to why the GFE documentation demonstrates a sufficient effort.

- The reconsideration official shall provide the Bidder with a written decision on reconsideration within five working days of the hearing explaining the basis for their finding.

DBE Bid Item Breakdown

The Bidder shall submit a DBE Bid Item Breakdown Form (WSDOT Form 272-054) as specified in the Special Provisions for Section 1-02.9, Delivery of Proposal.

DBE Trucking Credit Form

The Bidder shall submit a DBE Trucking Credit Form (WSDOT Form 272-058), as specified in the Special Provisions for Section 1-02.9, Delivery of Proposal.

Note: The DBE Trucking Credit Form is only required for a DBE Firm listed on the DBE Utilization Certification as a subcontractor for “Trucking” or “Hauling” and are performing a part of a bid item. For example, if the item of Work is Structure Excavation including Haul, and another firm is doing the excavation and the DBE Trucking firm is doing the haul, the form is required. For a DBE subcontractor that is responsible for an entire item of work that may require some use of trucks, the form is not required.

Procedures between Award and Execution

After Award and prior to Execution, the Contractor shall provide the additional information described below. Failure to comply shall result in the forfeiture of the Bidder’s Proposal bond or deposit.

1. A list of all firms who submitted a bid or quote in attempt to participate in this project whether they were successful or not. Include the business name and mailing address.

Note: The firms identified by the Contractor may be contacted by the Contracting Agency to solicit general information as follows: age of the firm and average of its gross annual receipts over the past three years.

Procedures after Execution

Commercially Useful Function (CUF)

The Contractor may only take credit for the payments made for Work performed by a DBE that is determined to be performing a CUF. Payment must be commensurate with the work actually performed by the DBE. This applies to all DBEs performing Work on a project, whether or not the DBEs are COA, if the Contractor wants to receive credit for their participation. The Engineer will conduct CUF reviews to ascertain whether DBEs are performing a CUF. A DBE performs a CUF when it is carrying out its responsibilities of its contract by actually performing, managing, and supervising the Work involved. The DBE must be responsible for negotiating price; determining quality and quantity; ordering the material, installing (where applicable); and paying for the material itself. If a DBE does not perform “all” of these functions on a furnish-and-install contract, it has not performed a CUF and the cost of materials cannot be counted toward DBE COA Goal. Leasing of equipment from a leasing company is allowed. However, leasing/purchasing equipment from the Contractor is not allowed. Lease agreements shall be provided prior to the Subcontractor beginning Work. Any use of the Contractor’s equipment by a DBE may not be credited as countable participation.

The DBE does not perform a CUF if its role is limited to that of an extra participant in a transaction, contract, or project through which the funds are passed in order to obtain the appearance of DBE participation.

In order for a DBE traffic control company to be considered to be performing a CUF, the DBE must be in control of its work inclusive of supervision. The DBE shall employ a Traffic Control Supervisor who is directly involved in the management and supervision of the traffic control employees and services.

The following are some of the factors that the Engineer will use in determining whether a DBE trucking company is performing a CUF:

- The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on the contract. The owner demonstrates business related knowledge, shows up on site and is determined to be actively running the business.
- The DBE itself shall own and operate at least one fully licensed, insured, and operational truck used on the Contract. The drivers of the trucks owned and leased by the DBE must be exclusively employed by the DBE and reflected on the DBE's payroll.
- Lease agreements for trucks shall indicate that the DBE has exclusive use of and control over the truck(s). This does not preclude the leased truck from working for others provided it is with the consent of the DBE and the lease provides the DBE absolute priority for use of the leased truck.
- Leased trucks shall display the name and identification number of the DBE.

UDBE/DBE/FSBE Truck Unit Listing Log

In addition to the subcontracting requirements of Section 1-08.1, each DBE trucking firm shall submit supplemental information consisting of a completed Primary UDBE/DBE/FSBE Truck Unit Listing Log (WSDOT Form 350-077), copy of vehicle registrations, and all Rental/Lease agreements (if applicable). The supplemental information shall be submitted to the Engineer prior to any trucking services being performed for DBE credit. Incomplete or incorrect supplemental information will be returned for correction. The corrected Primary UDBE/DBE/FSBE Truck Unit Listing Log and any Updated Primary UDBE/DBE/FSBE Truck Unit Listing Logs shall be submitted and accepted by the Engineer no later than ten calendar days of utilizing applicable trucks. Failure to submit or update the DBE Truck Unit Listing Log may result in trucks not being credited as DBE participation.

Each DBE trucking firm shall complete a Daily UDBE/DBE/FSBE Trucking Unit Listing Log for each day that the DBE performs trucking services for DBE credit. The Daily UDBE/DBE/FSBE Trucking Unit Listing Log forms shall be submitted to the Engineer by Friday of the week after the work was performed.

Joint Checking

A joint check is a check between a Subcontractor and the Contractor to the supplier of materials/supplies. The check is issued by the Contractor as payer to the Subcontractor and the material supplier jointly for items to be incorporated into the

project. The DBE must release the check to the supplier, while the Contractor acts solely as the guarantor.

A joint check agreement must be approved by the Engineer and requested by the DBE involved using the DBE Joint Check Request Form (form # 272-053) prior to its use. The form must accompany the DBE Joint Check Agreement between the parties involved, including the conditions of the arrangement and expected use of the joint checks.

The approval to use joint checks and the use will be closely monitored by the Engineer. To receive DBE credit for performing a CUF with respect to obtaining materials and supplies, a DBE must “be responsible for negotiating price, determining quality and quantity, ordering the material, installing and paying for the material itself.” The Contractor shall submit DBE Joint Check Request Form to the Engineer and be in receipt of written approval prior to using a joint check.

Material costs paid by the Contractor directly to the material supplier are not allowed. If proper procedures are not followed or the Engineer determines that the arrangement results in lack of independence for the DBE involved, no DBE credit will be given for the DBE’s participation as it relates to the material cost.

Prompt Payment

Prompt payment to all subcontractors shall be in accordance with Section 1-08.1. Prompt payment requirements apply to progress payments as well as return of retainage.

Subcontracts

Prior to a DBE performing Work on the Contract, an executed subcontract between the DBE and the Contractor shall be submitted to the Engineer. The executed subcontracts shall be submitted by email to the following email address

*** \$\$emailaddress\$\$ ***

The prime contractor shall notify the Engineer in writing within five calendar days of subcontract submittal.

Reporting

The Contractor and all subcontractors/suppliers/service providers that utilize DBEs to perform work on the project, shall maintain appropriate records that will enable the Engineer to verify DBE participation throughout the life of the project.

Refer to Section 1-08.1 for additional reporting requirements associated with this contract.

Changes in COA Work Committed to DBE

The Contractor shall utilize the COA DBEs to perform the work and supply the materials for which each is committed unless prior written approval by the Engineer is received by the Contractor. The Contractor shall not be entitled to any payment for work or material completed by the Contractor or subcontractors that was committed to be completed by the COA DBEs in the DBE Utilization Certification form.

Owner Initiated Changes

In instances where the Engineer makes changes that result in changes to Work that was committed to a COA DBE the Contractor may be directed to substitute for the Work.

Contractor Initiated Changes

The Contractor cannot change the scope or reduce the amount of work committed to a COA DBE without good cause. Reducing DBE Commitment is viewed as partial DBE termination, and therefore subject to the termination procedures below.

Original Quantity Underruns

In the event that Work committed to a DBE firm as part of the COA underruns the original planned quantities the Contractor may be required to substitute other remaining Work to another DBE.

Contractor Proposed DBE Substitutions

Requests to substitute a COA DBE must be for good cause (see DBE termination process below), and requires prior written approval of the Engineer. After receiving a termination with good cause approval, the Contractor may only replace a DBE with another certified DBE. When any changes between Contract Award and Execution result in a substitution of COA DBE, the substitute DBE shall have been certified prior to the bid opening on the Contract.

DBE Termination

Termination of a COA DBE (or an approved substitute DBE) is only allowed in whole or in part for good cause and with prior written approval of the Engineer. If the Contractor terminates a COA DBE without the prior written approval of the Engineer, the Contractor shall not be entitled to payment for work or material committed to, but not performed/supplied by the COA DBE. In addition, sanctions may apply as described elsewhere in this specification.

Prior to requesting approval to terminate a COA DBE, the Contractor shall give notice in writing to the DBE with a copy to the Engineer of its intent to request to terminate DBE Work and the reasons for doing so. The DBE shall have five (5) days to respond to the Contractor's notice. The DBE's response shall either support the termination or advise the Engineer and the Contractor of the reasons it objects to the termination of its subcontract.

If the request for termination is approved, the Contractor is required to substitute with another DBE to perform at least the same amount of work as the DBE that was terminated (or provide documentation of GFE). A plan to replace the COA DBE Commitment amount shall be submitted to the Engineer within 2 days of the approval of termination. The plan to replace the Commitment shall provide the same detail as that required in the DBE Utilization Certification.

The Contractor must have good cause to terminate a COA DBE.

Good cause typically includes situations where the DBE Subcontractor is unable or unwilling to perform the work of its subcontract. Good cause may exist if:

- The DBE fails or refuses to execute a written contract.
- The DBE fails or refuses to perform the Work of its subcontract in a way consistent with normal industry standards.
- The DBE fails or refuses to meet the Contractor's reasonable nondiscriminatory bond requirements.
- The DBE becomes bankrupt, insolvent, or exhibits credit unworthiness.
- The DBE is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to federal law or applicable State law.
- The DBE is ineligible to receive DBE credit for the type of work involved.
- The DBE voluntarily withdraws from the project and provides written notice of its withdrawal.
- The DBE's work is deemed unsatisfactory by the Engineer and not in compliance with the Contract.
- The DBE's owner dies or becomes disabled with the result that the DBE is unable to complete its Work on the Contract.

Good cause does not exist if:

- The Contractor seeks to terminate a COA DBE so that the Contractor can self-perform the Work.
- The Contractor seeks to terminate a COA DBE so the Contractor can substitute another DBE contractor or non-DBE contractor after Contract Award.
- The failure or refusal of the COA DBE to perform its Work on the subcontract results from the bad faith or discriminatory action of the Contractor (e.g., the failure of the Contractor to make timely payments or the unnecessary placing of obstacles in the path of the DBE's Work).

Decertification

When a DBE is "decertified" from the DBE program during the course of the Contract, the participation of that DBE shall continue to count as DBE participation as long as the subcontract with the DBE was executed prior to the decertification notice. The Contractor is obligated to substitute when a DBE does not have an executed subcontract agreement at the time of decertification.

Consequences of Non-Compliance

Breach of Contract

Each contract with a Contractor (and each subcontract the Contractor signs with a Subcontractor) must include the following assurance clause:

The Contractor, subrecipient, or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these

requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the Contractor from future bidding as non-responsible.

Notice

If the Contractor or any Subcontractor, Consultant, Regular Dealer, or service provider is deemed to be in non-compliance, the Contractor will be informed in writing, by certified mail by the Engineer that sanctions will be imposed for failure to meet the DBE COA Commitment and/or submit documentation of good faith efforts. The notice will state the specific sanctions to be imposed which may include impacting a Contractor or other entity's ability to participate in future contracts.

Sanctions

If it is determined that the Contractor's failure to meet all or part of the DBE COA Commitment is due to the Contractor's inadequate good faith efforts throughout the life of the Contract, including failure to submit timely, required Good Faith Efforts information and documentation, the Contractor may be required to pay DBE penalty equal to the amount of the unmet Commitment, in addition to the sanctions outlined in Section 1-07.11(5).

Payment

Compensation for all costs involved with complying with the conditions of this Specification and any other associated DBE requirements is included in payment for the associated Contract items of Work, except otherwise provided in the Specifications.

(January 13, 2021 WSDOT GSP, Option 4)

Special Training Provisions

General Requirements

The Contractor's equal employment opportunity, affirmative action program shall include the requirements set forth below. The Contractor shall provide on-the-job training aimed at developing trainees to journey-level status in the trades involved. The number of training hours shall be *** **\$\$\$** ***. Trainees shall not be assigned less than 400 hours per individual per Contract. The Contractor may elect to accomplish training as part of the work of a subcontractor, however, the Prime Contractor shall retain the responsibility for complying with these Special Provisions (achieving the training goal). When the Contractor's training plan includes trainees for Subcontractors or lower-tier Subcontractors, this special provision shall be included in the subcontract.

Trainee Approval

The Contractor shall make every effort to employ/enroll minority and women trainees to the extent such persons are available within a reasonable recruitment area. This training provision is not intended and shall not be used to discriminate against any applicant for

training, whether that person is a minority, woman or otherwise. A non-minority male trainee or apprentice may be approved provided the following requirements are met:

1. The Contractor is otherwise in compliance with the contract's Equal Employment Opportunity (EEO) and On-the-Job Training (OJT) requirements and provides documentation of the efforts taken to fill the specific training position with either minorities or females
2. or, if not otherwise in compliance, furnishes evidence of his/her systematic and direct recruitment efforts in regard to the position in question and in promoting the enrollment and/or employment of minorities and females in the craft which the proposed trainee is to be trained
3. and the Contractor has made a good faith effort towards recruiting of minorities and women. As a minimum good faith efforts shall consist of the following:
 - a. Distribution of written notices of available employment opportunities with the Contractor and enrollment opportunities with its unions. Distribution should include but not be limited to; minority and female recruitment sources, WSDOT's OJT Support Services Coordinator, and minority and female community organizations.
 - b. Records documenting the Contractor's efforts and the outcome of those efforts, to employ minority and female applicants and/or refer them to unions.
 - c. Records reflecting the Contractor's efforts in participating in developing minority and female on-the-job training opportunities, including upgrading programs and apprenticeship opportunities.
 - d. Distribution of written notices to unions and training programs disseminating the Contractor's EEO policy and requesting cooperation in achieving EEO and OJT obligations (and their written responses). For assistance in locating trainee candidates, the Contractor may call WSDOT's OJT Support Services Coordinator at (360) 704-6314 or email ojtssinfo@wsdot.wa.gov.

No employee shall be employed as a trainee in any classification in which the employee has successfully completed a training course leading to journey-level worker status or in which the employee has been employed as a journey-level worker. The Contractor's records shall document the methods for determining the trainee's status and findings in each case. When feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

For the purpose of this specification, acceptable training programs are those employing trainees/apprentices registered with the following:

1. Washington State Department of Labor & Industries — State Apprenticeship Training Council (SATC) approved apprenticeship agreement:
 - a. Pursuant to RCW 49.04.060, an apprenticeship agreement shall be;
 - i. an individual written agreement between an employer and apprentice
 - ii. a written agreement between (an employer or an association of employers) and an organization of employees describing conditions of employment for apprentices
 - iii. a written statement describing conditions of employment for apprentices in a plant where there is no bona fide employee organization.

All such agreements shall conform to the basic standards and other provisions of RCW Chapter 49.04.

2. Apprentices must be registered with U.S. Department of Labor — Apprenticeship Training, Employer, and Labor Services (ATELS) approved program.

Or

3. Non-ATELS/SATC programs that have been submitted to the Contracting Agency for approval by the FHWA for the specific project.

Obligation to Provide Information

Upon starting a new trainee, the Contractor shall furnish the trainee a copy of the approved program the Contractor will follow in providing the training. Upon completion of the training, the Contractor shall provide the Contracting Agency with a certification showing the type and length of training satisfactorily completed by each trainee.

Training Program Approval

The Training Program shall meet the following requirements:

1. The Training Program (DOT Form 272-049) must be submitted to the Engineer for approval **prior to commencing contract work** and shall be resubmitted when modifications to the program occur.
2. The minimum length and type of training for each classification will be as established in the training program as approved by the Contracting Agency.
3. The Training Program shall contain the trades proposed for training, the number of trainees, the hours assigned to the trade and the estimated beginning work date for each trainee.

4. Unless otherwise specified, Training Programs will be approved if the proposed number of training hours equals the training hours required by contract and the trainees are not assigned less than 400 hours each.
5. After approval of the training program, information concerning each individual trainee and good faith effort documentation shall be submitted on (DOT Form 272-050.)
6. In King County, laborer trainees or apprentices will not be approved on contracts containing less than 2000 training hours as specified in this Section. In King County, no more than twenty percent (20%) of hours proposed for trainees or apprentices shall be in the laborer classification when the contract contains 2000 or more hours of training as specified in this Section. Trainees shall not be assigned less than 400 hours per contract.
7. Flagging programs will not be approved. Other programs that include flagging training will only be approved if the flagging portion is limited to an orientation of not more than 20 hours.
8. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Some off-site training is permissible as long as the training is an integral part of an approved training program.
9. It is normally expected that a trainee will begin training on the project as soon as feasible after start of work, utilizing the skill involved and remain on the project as long as training opportunities exist in the work classification or the trainee reaches journey-level status. It is not required that all trainees be on board for the entire length of the contract. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.
10. Wage Progressions: Trainees will be paid at least the applicable ratios or wage progressions shown in the apprenticeship standards published by the Washington State Department of Labor and Industries. In the event that no training program has been established by the Department of Labor and Industries, the trainee shall be paid in accordance with the provisions of RCW 39.12.021, which reads as follows:

Apprentice workers employed upon public works projects for whom an apprenticeship agreement has been registered and approved with the State Apprenticeship Council pursuant to RCW 49.04, must be paid at least the prevailing hourly rate for an apprentice of that trade. Any worker for whom an apprenticeship agreement has not been registered and approved by the State Apprenticeship Council shall be considered to be a fully qualified journey-level worker, and, therefore, shall be paid at the prevailing hourly rate for journey-level worker.

Compliance

In the event that the Contractor is unable to accomplish the required training hours but can demonstrate a good faith effort to meet the requirements as specified, then the Contracting Agency will adjust the training goals accordingly.

Noncompliance and Sanctions

When a contractor violates EEO provisions of the contract, the Contracting Agency may impose damages in accordance with WSDOT's Equal Opportunity Compliance Program and the FHWA 1273. These damages consist of additional administrative costs including, but not limited to, the inspection, supervision, engineering, compliance, and legal staff time and expenses necessary for investigating, reporting, and correcting violations, as well as loss of federal funding, if any. Damages attributable to a contractor's violations of the EEO provisions may be deducted from progress payments due the Contractor. Before any money is withheld, the Contractor will be provided with a notice of the basis of the violations, the amount to be withheld and provided an opportunity to respond. The monetary value of the sanction will be calculated on a case-by-case basis and based on the damages incurred by the Contracting Agency.

The Contracting Agency's decision to recover damages for an EEO violation does not limit its ability to suspend or revoke the contractor's pre-qualification status or seek other remedies as allowed by federal or state law. In appropriate circumstances, the Contracting Agency may also refer the Contractor to other state or federal authorities for additional sanctions.

Requirements for Non ATELS/SATC Approved Training Programs

Contractors who are not affiliated with a program approved by ATELS or SATC may have their training program approved (by FHWA) provided that the program is submitted for approval on DOT Form 272-049, and the following standards are addressed and incorporated in the Contractor's program:

1. The program establishes minimum qualifications for persons entering the training program.
2. The program shall outline the work processes in which the trainee will receive supervised work experience and training on-the-job and the allocation of the approximate time to be spent in each major process. The program shall include the method for recording and reporting the training completed shall be stated.
3. The program shall include a numeric ratio of trainees to journey-level worker consistent with proper supervision, training, safety, and continuity of employment. The ratio language shall be specific and clear as to application in terms of job site and workforce during normal operations (normally considered to fall between 1:10 and 1:4).
4. The terms of training shall be stated in hours. The number of hours required for completion to journey-level worker status shall be comparable to the

apprenticeship hours established for that craft by the SATC. The following are examples of programs that are currently approved:

CRAFT	HOURS
Laborer	4,000
Ironworker	6,000
Carpenter	5,200-8,000
Construction Electrician	8,000
Operating Engineer	6,000-8,000
Cement Mason	5,400
Teamster	2,100

5. The method to be used for recording and reporting the training completed shall be stated.

Measurement

The Contractor may request that the total number of “training” hours for the contract be increased subject to approval by the Contracting Agency. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other sources do not prohibit other reimbursement. Reimbursement to the Contractor for off-site training as indicated previously may only be made when the Contractor does one or more of the following and the trainees are concurrently employed on a Federal-aid project:

1. contributes to the cost of the training,
2. provides the instruction to the trainee,
3. pays the trainee’s wages during the off- site training period.

Reimbursement will be made upon receipt of a certified invoice that shows the related payroll number, the name of trainee, total hours trained under the program, previously paid hours under the contract, hours due this estimate, and dollar amount due this estimate. The certified invoice shall show a statement indicating the Contractor’s effort to enroll minorities and women when a new enrollment occurs. If a trainee is participating in a SATC/ATELS approved apprenticeship program, a copy of the certificate showing apprenticeship registration must accompany the first invoice on which the individual appears. Reimbursement for training occurring prior to approval of the training program will be allowed if the Contractor verbally notifies the Engineer of this occurrence at the time the apprentice/trainee commences work. A trainee/apprentice, regardless of craft, must have worked on the contract for at least 20 hours to be eligible for reimbursement.

Training hours that are not in compliance with the approved training plan will not be measured.

Payment

The Contractor will be reimbursed under the item “Training” per hour for each hour of approved training provided under the Contract.

1-07.12 Federal Agency Inspection
(January 25, 2016 WSDOT GSP, Option 1)

Required Federal Aid Provisions

The Required Contract Provisions Federal Aid Construction Contracts (FHWA 1273) Revised May 1, 2012 and the amendments thereto supersede any conflicting provisions of the Standard Specifications and are made a part of this Contract; provided, however, that if any of the provisions of FHWA 1273, as amended, are less restrictive than Washington State Law, then the Washington State Law shall prevail.

The provisions of FHWA 1273, as amended, included in this Contract require that the Contractor insert the FHWA 1273 and amendments thereto in each Subcontract, together with the wage rates which are part of the FHWA 1273, as amended. Also, a clause shall be included in each Subcontract requiring the Subcontractors to insert the FHWA 1273 and amendments thereto in any lower tier Subcontracts, together with the wage rates. The Contractor shall also ensure that this section, REQUIRED FEDERAL AID PROVISIONS, is inserted in each Subcontract for Subcontractors and lower tier Subcontractors. For this purpose, upon request to the Engineer, the Contractor will be provided with extra copies of the FHWA 1273, the amendments thereto, the applicable 18 wage rates, and this Special Provision.

1-07.15 Temporary Water Pollution Prevention

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan
(March 17, 2020, Lynnwood GSP)

The last sentence of the first paragraph of Section 1-07.15(1) is deleted and replaced with:

The Contractor shall use the City of Lynnwood SPCC Plan template, available on the City's website at <https://www.lynnwoodwa.gov/Government/Departments/Public-Works/Environmental-and-Surface-Water-Education-and-Outreach/National-Pollution-Discharge-Elimination-System-NPDES>

in lieu of the WSDOT template.

1-07.16 Protection and Restoration of Property

1-07.16(2) Vegetation Projection and Restoration
(August 2, 2010 WSDOT GSP)

Section 1-07.16(2) is supplemented with the following:

Vegetation and soil protection zones for trees shall extend out from the trunk to a distance of 1 foot radius for each inch of trunk diameter at breast height.

Vegetation and soil protection zones for shrubs shall extend out from the stems at ground level to twice the radius of the shrub.

Vegetation and soil protection zones for herbaceous vegetation shall extend to encompass the diameter of the plant as measured from the outer edge of the plant.

1-07.17 Utilities and Similar Facilities

(April 2, 2007 WSDOT GSP, Option 1)

Section 1-07.17 is supplemented with the following:

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

The following addresses and telephone numbers of utility companies known or suspected of having facilities within the project limits are supplied for the Contractor's convenience:

*** City of Lynnwood

Contact: Nicholas Barnett (Public Work Permitting)

20816 44th Ave W, Suite 203

Lynnwood, WA 98036

Phone: (425) 670-5211 / (425) 231-1798

E-Mail: NBarnett@lynnwoodwa.gov

City of Lynnwood

Contact: Jared Bond (Public Works Utilities Manager)

20525 60th Ave W

Lynnwood, WA 98036

Phone: (425) 670-5207

E-Mail: Jbond@lynnwoodwa.gov

Snohomish PUD

Contact: Doug O'Donnell

21014 63rd Ave W

Lynnwood, WA 98036

Phone: (425) 760-6697

E-Mail: DCO'Donnell@snopud.com

Comcast Cable

Phone: (800) 934-6489

Ziplay Fiber

6710 108th Ave NE

Kirkland, WA 98033

Phone: (866) 699-4759

Puget Sound Energy Gas

Contact: Hong Nguyen

10885 NE 4th Street

Bellevue, WA 98004

Phone: (253) 395-6904

E-Mail: Hong.Nguyen@pse.com

Century Link/Lumen
Contact: Emily Starkel
23315 66th Ave S
Kent, WA 98032
Phone: (206) 733-5103
E-Mail: Emily.Starkel@lumen.com ***

(April 2, 2007 WSDOT GSP, Option 2)

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

Public and private utilities, or their Contractors, will furnish all work necessary to adjust, relocate, replace, or construct their facilities unless otherwise provided for in the Plans or these Special Provisions. Such adjustment, relocation, replacement, or construction will be done during the prosecution of the work for this project. It is anticipated that utility adjustment, relocation, replacement or construction within the project limits will be completed as follows:

***** Snohomish Co. PUD (Power) *****

The Contractor shall attend a mandatory utility preconstruction meeting with the Engineer, all affected Subcontractors, and all utility owners and their Contractors prior to beginning onsite work.

The following addresses and telephone numbers of utility companies or their Contractors that will be adjusting, relocating, replacing or constructing utilities within the project limits are supplied for the Contractor's use:

*** Snohomish Co. PUD
Contact: Doug O'Donnell
Office Phone: (425) 760-6697

Contact: Andra Flaherty
Office Phone: (425) 783-4419

Contact: Eddie Haugen
Office Phone: (425) 783-8202 ***

(*****)

If or when utility conflicts occur, the Contractor shall continue the construction process on other aspects of the project. Any change to the operation necessary to work around the conflicts shall be incidental to the various bid items of the contract and no further compensation will be made. All costs and expenses incurred by the Contractor or its subcontractors to work around the utility conflicts shall be borne exclusively by the Contractor or the utility owners. Unless otherwise agreed to by the City in writing no additional compensation shall be paid by the City to the Contractor to resolve utility conflicts with the utility owners.

1-07.18 Public Liability and Property Damage Insurance

Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance (January 4, 2016 APWA GSP)

1-07.18(1) General Requirements

- A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.
- B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.
- C. If any insurance policy is written on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made, and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.
- D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.
- E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.
- F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency.
- G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the

Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers
- *** Parametrix, Inc. ***
- *** HWA GeoSciences Inc. ***

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors.

The Contractor shall ensure that all Subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of

Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

\$1,000,000	Each Occurrence
\$2,000,000	General Aggregate
\$2,000,000	Products & Completed Operations Aggregate
\$1,000,000	Personal & Advertising Injury each offence
\$1,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

\$1,000,000	Combined single limit each accident
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1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.18(5)D Excess or Umbrella Liability

(January 4, 2016 APWA GSP)

The Contractor shall provide Excess or Umbrella Liability insurance with limits of not less than *** **Five (5)** *** million each occurrence and annual aggregate. This excess or umbrella liability coverage shall be excess over and as least as broad in coverage as the Contractor's Commercial General and Auto Liability insurance

All entities listed under 1-07.18(2) of these Special Provisions shall be named as additional insureds on the Contractor's Excess or Umbrella Liability insurance policy.

This requirement may be satisfied instead through the Contractor's primary Commercial General and Automobile Liability coverages, or any combination thereof that achieves the overall required limits of insurance.

1-07.18(5)J Pollution Liability

(January 4, 2016 APWA GSP)

The Contractor shall provide a Contractors Pollution Liability policy, providing coverage for claims involving bodily injury, property damage (including loss of use of tangible property that has not been physically injured), cleanup costs, remediation, disposal or other handling of pollutants, including costs and expenses incurred in the investigation, defense, or settlement of claims, arising out of any one or more of the following:

1. Contractor's operations related to this project.

2. Remediation, abatement, repair, maintenance or other work with lead-based paint or materials containing asbestos.
3. Transportation of hazardous materials away from any site related to this project.

All entities listed under 1-07.18(2) of these Special Provisions shall be named by endorsement as additional insureds on the Contractors Pollution Liability insurance policy.

Such Pollution Liability policy shall provide the following minimum limits:

*** \$1,000,000 *** each loss and annual aggregate

1-07.18(5)K Professional Liability
(January 4, 2016 APWA GSP)

The Contractor and/or its Subcontractor(s) and/or its design consultant providing construction management, value engineering, or any other design-related non-construction professional services shall provide evidence of Professional Liability insurance covering professional errors and omissions.

Such policy shall provide the following minimum limits:

\$1,000,000 per claim and annual aggregate

If the scope of such design-related professional services includes work related to pollution conditions, the Professional Liability insurance shall include coverage for Environmental Professional Liability.

If insurance is on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract.

1-07.23 Public Convenience And Safety

(January 5, 2015 WSDOT GSP, Option 5)

Lane closures are subject to the following restrictions:

*** N/A ***

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any change in the closure hours.

Lane closures are not allowed on any of the following:

1. A holiday,
2. A holiday weekend; holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend. A holiday weekend includes Saturday, Sunday, and the holiday.

3. After *** 12:00pm*** on the day prior to a holiday or holiday weekend, and
4. Before *** 9:30am*** on the day after the holiday or holiday weekend.

(May 2, 2017 APWA GSP)

Revise the third sentence of the second paragraph to read:

Accessibility to existing or temporary pedestrian push buttons shall not be impaired; if approved by the Contracting Agency activating pedestrian recall timing or other accommodation may be allowed during construction.

1-07.24 Rights of Way

(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise

interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters **New Section**
(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference **New Section**
(October 10, 2008 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

(February 14, 2020, Lynnwood GSP)

Prior to the Preconstruction Conference, the Contractor shall prepare and submit to the Contracting Agency the following documents for approval:

1. Spill Prevention, Control & Countermeasures (SPCC) Plan – Per Section 1-07.15(1);
2. Storm Water Pollution Prevention Plan (SWPPP) – Per Section 8-01.3(1)A.

The Contractor will not be authorized to mobilize or begin on-site work until both the SWPPP and SPCC plan have been approved by the Contracting Agency.

Add the following new section:

1-08.0(2) Hours of Work

New Section

(December 8, 2014 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than *** 3 business days *** prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.

4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll

1-08.1 Subcontracting
(December 19, 2019 APWA GSP, Option A)

Prior to any subcontractor or lower tier subcontractor beginning work, the Contractor shall submit to the Engineer a certification (WSDOT Form 420-004) that a written agreement between the Contractor and the subcontractor or between the subcontractor and any lower tier subcontractor has been executed. This certification shall also guarantee that these subcontract agreements include all the documents required by the Special Provision Federal Agency Inspection.

A Subcontractor or lower tier Subcontractor will not be permitted to perform any work under the contract until the following documents have been completed and submitted to the Engineer:

1. Request to Sublet Work (WSDOT Form 421-012), and
2. Contractor and Subcontractor or Lower Tier Subcontractor Certification for Federal-aid Projects (WSDOT Form 420-004).

The Contractor shall submit to the Engineer a completed Monthly Retainage Report (WSDOT Form 272-065) within 15 calendar days after receipt of every monthly progress payment until every Subcontractor and lower tier Subcontractor's retainage has been released.

The ninth paragraph, beginning with "On all projects, ..." is revised to read:

The Contractor shall certify to the actual amount received from the Contracting Agency and amounts paid to all firms that were used as Subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the Contract. This includes all Disadvantaged, Minority, Small, Veteran or Women's Business Enterprise firms. This Certification shall be submitted to the Engineer on a monthly basis each month between Execution of the Contract and Physical Completion of the Contract using the application available at: <https://wsdot.diversitycompliance.com>. A monthly report shall be submitted for every month between Execution of the Contract and Physical Completion regardless of whether payments were made or work occurred.

1-08.3 Progress Schedule

1-08.3(2) Progress Schedule Types

1-08.3(2)B Type B Progress Schedule
(March 13, 2012 APWA GSP)

Revise the first paragraph to read:

The Contractor shall submit a preliminary Type B Progress Schedule at or prior to the preconstruction conference. The preliminary Type B Progress Schedule shall comply with all of these requirements and the requirements of Section 1-08.3(1), except that it may be limited to only those activities occurring within the first 60-working days of the project.

Revise the first sentence of the second paragraph to read:

The Contractor shall submit **5** copies of a Type B Progress Schedule depicting the entire project no later than 21-calendar days after the preconstruction conference.

1-08.3(2)D Weekly Look-Ahead Schedule
(*****)

Section 1-08.3(2)D is supplemented with the following:

A 3-week look-ahead schedule is to be submitted at each weekly progress meetings. The look-ahead schedule shall show the Works complete in the previous week and proposed Work activities for the next 2 weeks.

1-08.3(5) Payment
(*****)

Section 1-08.3(5) is revised to read:

Payment will be made for the following Bid item when it is included in the Proposal:

“Min Bid Req – Type *** B *** Progress Schedule *** \$15,000 ***”, lump sum.

The lump sum price shall be full pay for all costs for furnishing the Type *** B *** Progress Schedule and preliminary Type *** B *** Progress Schedule.

Payment of 80 percent of the lump sum price will be made upon approval of the Progress Schedule.

Payment will be increased to 100 percent of the lump sum price upon completion of 80 percent of the original total Contract Award amount.

All costs for providing Type A Progress Schedules and Weekly Look-Ahead Schedules are considered incidental to other items of Work in the Contract.

No payment will be made for Schedule Updates that are required due to the Contractor's operations. Schedule Updates required by events that are attributed to the actions of the Contracting Agency will be paid for in accordance with Section 1-09.4.

1-08.4 Prosecution of Work

Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work *(July 23, 2015 APWA GSP)*

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

1-08.5 Time for Completion *(March 13, 1995 WSDOT GSP, Option 7)*

Section 1-08.5 is supplemented with the following:

This project shall be physically completed within *** 365 *** working days.

(*****)

All works below the ordinary high-water line and subsurface works (Boardwalk #2, pedestrian bridge, and Boardwalk #3) in the wetlands shall be completed and approved by the Engineer within the HPA fish window from July 1 through September 30.

All preparation and cleanup works (Boardwalk #2, pedestrian bridge, and Boardwalk #3) around wetland shall be completed and approved by the Engineer from June 15 through October 15.

(November 30, 2018 APWA GSP, Option B)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the *** tenth *** calendar day after the Notice to Proceed date. If the Contractor starts work on the project at an earlier date, then contract time shall begin on the first working day when onsite work begins.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
 - a. Certified Payrolls (per Section 1-07.9(5)).
 - b. Material Acceptance Certification Documents
 - c. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
 - d. Final Contract Voucher Certification
 - e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors

- f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
- g. Property owner releases per Section 1-07.24

1-08.6 Suspension of Work
(January 2, 2018 WSDOT GSP, Option 2)

Section 1-08.6 is supplemented with the following:

Procurement Suspension

Contract time may be suspended for procurement of critical materials (Procurement Suspension). In order to receive a Procurement Suspension, the Contractor shall within 21 calendar days after execution by the Contracting Agency, place purchase orders for all materials deemed critical by the Contracting Agency for physical completion of the contract. The Contractor shall provide copies of purchase orders for the critical materials. Such purchase orders shall disclose the purchase order date and estimated delivery dates for such critical material.

The Contractor shall show procurement of the materials listed below as activities in the Progress Schedule. If the approved Progress Schedule indicates that the materials procurement are critical activities, and if the Contractor has provided documentation that purchase orders are placed for the critical materials within the prescribed 21 calendar days, then contract time shall be suspended upon physical completion of all critical work except that work dependent upon the below listed critical materials:

- Signal equipment
- Boardwalk deck
- Piling

Charging of contract time will resume upon delivery of the critical materials to the Contractor or 120 calendar days after execution by the Contracting Agency, whichever occurs first.

1-08.9 Liquidated Damages
(March 3, 2021 APWA GSP, Option A)

Replace Section 1-08.9 with the following:

Time is of the essence of the Contract. Delays inconvenience the traveling public, obstruct traffic, interfere with and delay commerce, and increase risk to Highway users. Delays also cost tax payers undue sums of money, adding time needed for administration, engineering, inspection, and supervision.

Accordingly, the Contractor agrees:

1. To pay liquidated damages in the amount of *** \$4,100*** for each working day beyond the number of working days established for Physical Completion, and
2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine the Contract Work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, liquidated damages identified above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

Liquidated damages will not be assessed for any days for which an extension of time is granted. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.2 Weighing Equipment

1-09.2(1) General Requirements for Weighing Equipment *(July 23, 2015 APWA GSP, Option 2)*

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman's Daily Report, unless the printed ticket contains the same information that is on the Scaleman's Daily Report Form. The scale operator must provide AM and/or PM tare weights for each truck on the printed ticket.

1-09.2(5) Measurement *(May 2, 2017 APWA GSP)*

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

1-09.6 Force Account
(October 10, 2008 APWA GSP)

Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting Agency does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by Engineer.

1-09.7 Mobilization
(December 10, 2020 APWA GSP)

Delete this Section and replace it with the following:

Mobilization consists of preconstruction expenses and the costs of preparatory Work and operations performed by the Contractor which occur before 10 percent of the total original amount of an individual Bid Schedule is earned from other Contract items on that Bid Schedule. Items which are not to be included in the item of Mobilization include but are not limited to:

1. Any portion of the Work covered by the specific Contract item or incidental Work which is to be included in a Contract item or items.
2. Profit, interest on borrowed money, overhead, or management costs.
3. Any costs of mobilizing equipment for force account Work.

Based on the lump sum Contract price for "Mobilization", partial payments will be made as follows:

1. When 5 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 50 percent of the Bid Item for mobilization on that original Bid Schedule, 5 percent of the total of that original Bid Schedule, or 5 percent of the total original Contract amount, whichever is the least, will be paid.
2. When 10 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 100 percent of the Bid Item for mobilization on that original Bid Schedule, 10 percent of the total of that original Bid Schedule, or 10 percent of the total original Contract amount, whichever is the least, will be paid.
3. When the Substantial Completion Date has been established for the project, payment of any remaining amount Bid for mobilization will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

1-09.8 Payment for Material on Hand
(August 3, 2009 WSDOT GSP)

The last paragraph of Section 1-09.8 is revised to read:

The Contracting Agency will not pay for material on hand when the invoice cost is less than \$2,000. As materials are used in the work, credits equaling the partial payments for them will be taken on future estimates. Each month, no later than the estimate due date, the Contractor shall submit a letter to the Project Engineer that clearly states: 1) the amount originally paid on the invoice (or other record of production cost) for the items on hand, 2) the dollar amount of the material incorporated into each of the various work items for the month, and 3) the amount that should be retained in material on hand items. If work is performed on the items and the Contractor does not submit a letter, all of the previous material on hand payment will be deducted on the estimate. Partial payment for materials on hand shall not constitute acceptance. Any material will be rejected if found to be faulty even if partial payment for it has been made.

1-09.9 Payments
(March 13, 2012 APWA GSP)

Delete the first four paragraphs and replace them with the following:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.

3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

(*****)

The following is added at the end of this section:

The Contractor shall sign electronically using the software provided by the Contracting Agency and return the Comparison of Quantities as indicated in this section. Within 21 days of execution, the Contractor shall submit a Type 1 Working Drawing designating who will sign the Comparison of Quantities, including their full name, email address, and text-message capable phone number. The designee shall be an authorized signer in accordance with Section 1-02.1.

1-09.9(1) Retainage
(June 27, 2011 WSDOT GSP, Option 1)

Section 1-09.9(1) including title is deleted and replaced with the following:

Vacant

1-09.11 Disputes and Claims

1-09.11(3) Time Limitation and Jurisdiction
(November 30, 2018 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties

understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

1-09.13(3) Claims \$250,000 or Less
(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

The Contractor and the Contracting Agency mutually agree that those claims that total \$250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13(3)A Arbitration General
(November 30, 2018 APWA GSP)

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2 Traffic Control Management

1-10.2(1) General
(September 7, 2021 WSDOT GSP Option 1)

The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035
<https://www.nwlett.edu>

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778
<https://www.esc.org>

The American Traffic Safety Services Association
15 Riverside Parkway, Suite 100
Fredericksburg, Virginia 22406-1022
Training Dept. Toll Free (877) 642-4637
Phone: (540) 368-1701
<https://altssa.com/training>

Integrity Safety
13912 NE 20th Ave.
Vancouver WA 98686
(360) 574-6071
<https://www.integritysafety.com>

US Safety Alliance
(904) 705-5660
<https://www.ussafetyalliance.com>

(January 5, 2015 WSDOT GSP, Option 2)

The primary TCS shall have a minimum of 500 hours of experience providing traffic control as a TCS or traffic control labor on multilane highways with a speed limit of 55 mph or greater. The Contractor shall submit a certification of the TCS's experience with the TCS designation. Documentation of experience shall be available upon request by the Engineer.

1-10.2(2) Traffic Control Plans

(April 1, 2016, Lynnwood GSP)

The second paragraph of section 1-10.2(2) is supplemented with the following:

When the Contractor chooses to modify, supplement or replace a traffic control plan from the Contract documents, the following information shall, as a minimum, be included on the Contractor's submittal, where applicable:

- Project name and contract number
- Street names
- Posted speed limit(s)
- Intersecting street(s)
- Address or address range on street if no intersecting street(s) is included
- North arrow
- Direction of vehicle, bike, and pedestrian flow
- Traffic control device description and spacing

- Taper, tangent, and buffer dimensions
- Location of work zone
- Sign size(s)
- MUTCD alpha numeric sign designation
- Sign color and retroreflectivity
- Orientation of sign faces to traffic flow
- Location(s) of flagger(s) and/or uniformed police officer(s)
- Relevant existing lane channelization and features like c-curbing, medians, and bulb-outs
- Presence/absence of bicycle lanes and/or sidewalks
- Provisions for night work when it is proposed

(*****)

Contractor shall provide Traffic Control Plans for City's approval for traffic control needs on 48th Ave W around Lynnwood Transit Center Park & Ride at end of Boardwalk #3 for construction access. It is anticipated that there will only be traffic from Sound Transit Contractor during duration of construction access at 48th Ave W but Traffic Control Plan at 48th Ave W should accommodate both Sound Transit Contractor and public traffic. These works shall be paid under the lump sum item of "Project Temporary Traffic Control".

1-10.3 Traffic Control Labor, Procedures, and Devices

1-10.3(1) Traffic Control Labor

1-10.3(1)B Other Traffic Control Labor

(April 28, 2020, Lynnwood GSP)

Section 1-10.3(1)B is supplemented with the following:

Uniformed Police Officer

Definitions:

Uniformed Police Officer as used in this specification is a "General Authority Washington Peace Officer" as defined by RCW 10.93.020 (3), or a "Specially Commissioned Washington Peace Officer" as defined by RCW 10.93.020(5).

Law Enforcement Agency as used in this specification is a "General Authority Washington Law Enforcement Agency" as defined by RCW 10.93.020 (1).

The Contractor shall arrange for off-duty Uniformed Police Officers to be present for the following activities:

1. At the commissioning of a new traffic signal, or the recommissioning of an existing traffic signal which has been upgraded.
2. Countermanding a traffic signal indication at a signalized intersection.

3. Directing vehicle and pedestrian traffic when a traffic signal indication is turned off or is inoperative.
4. Where the Engineer deems it necessary for safety, including work during hours of darkness.

It shall be the Contractor's responsibility to secure the off duty Uniformed Police Officer services required by the contract, including the costs to arrange for and supervise the service.

The following contact information for potential service providers is supplied for the Contractor's convenience:

Lynnwood Police Officers' Guild
Contact: Sgt. James Breault
Phone: (425) 754-0056
Email: jbreault@lynnwoodwa.gov

Snohomish County Deputy Sheriffs' Assoc.
Contact: Officer Alexander Ross, Off-Duty Coordinator
Phone: (425) 754-9011
Email: Alex.Ross@co.snohomish.wa.us

Washington State Patrol
Contact: Overtime Coordinator
Phone: (360) 654-1284
Email: D7ServiceRequest@wsp.wa.gov

The services provided under the bid item "Uniformed Police Officer" shall be considered a subcontract with the attendant requirements and responsibilities.

The Contractor must obtain prior approval for use of off-duty Uniformed Police Officers through their Approved Traffic Control Plan and approved amendments to the Plan. The off-duty Uniformed Police Officer shall be in addition to all other personnel required for flagging according to the approved traffic control plan.

A Uniformed Police Officer shall be provided in the event of accidental power outages or disruption of a signalized intersection as a result of Contractor's Work and remain in place until the intersection becomes satisfactorily operational as determined by City of Lynnwood Traffic Engineer or his/her representative.

1-10.4 Measurement

1-10.4(2) Item Bids With Lump Sum for Incidentals *(April 28, 2020, Lynnwood GSP)*

Section 1-10.4(2) is supplemented with the following:

"Uniformed Police Officer" will be measured by the hour. Hours will be measured for each fully equipped Uniformed Police Officer, including vehicle, if required, directing or monitoring traffic, as shown on an approved Traffic Control Plan or as directed by the Engineer and in accordance with Section 1-10.3(1)B of these Special provisions.

1-10.4(3) Reinstating Unit Items With Lump Sum Traffic Control
(August 2, 2004 WSDOT GSP, Option 1)

Section 1-10.4(3) is supplemented with the following:

The bid proposal contains the item “Project Temporary Traffic Control,” lump sum and the additional temporary traffic control items listed below. The provisions of Section 1-10.4(1), Section 1-10.4(3), and Section 1-10.5(3) shall apply.

*** Uniformed Police Officer

Traffic Control Supervisor

Flagger ***

1-10.5 Payment

1-10.5(2) Item Bids with Lump Sum for Incidentals
(April 28, 2020, Lynnwood GSP)

Section 1-10.5(2) is supplemented with the following:

“Uniformed Police Officer”, per hour

The unit contract price for “Uniformed Police Officer”, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by the Contractor in performing the Contract Work defined in Section 1-10.3(1)B of these Special Provisions, including all costs for arrangement for and supervision of uniformed law enforcement personnel and vehicles to participate in the Contractor’s traffic control activities.

END OF DIVISION 1

DIVISION 2
EARTHWORK

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.1 Description
(*****)

Section 2-01.1 is supplemented with the following:

The Work also includes preparation work for the mitigation planting areas, clearing for the boardwalk limits and other additional tree removal outside of clearing and grubbing limit as needed.

(NWR September 12, 2019)

This Work includes the application of herbicide to clearing and grubbing areas prior to clearing and grubbing and selectively clearing, grubbing, and pruning to accommodate the Work and preserve vegetation.

2-01.2 Disposal of Usable Material and Debris

2-01.2(2) Disposal Method No. 2 – Waste Site
(*****)

Section 2-01.2(2) is supplemented with the following:

All excess material removed by clearing and grubbing operations shall be disposed of by the Contractor at a legal disposal site obtained and paid for by the Contractor.

2-01.3 Construction Requirements
(*****)

Section 2-01.3 is supplemented with the following:

Clearing and Grubbing

The Contractor shall flag the clearing and grubbing limits and install all tree protection measures for the Engineer's approval prior to start of construction. Flagging and tree protection shall be maintained for the duration of the Contract. If there is any conflict between the Plans and field conditions, notify the Project Representative. All costs of protecting from damage those plants designated to be saved shall be incidental to the bid item "Clearing and Grubbing."

Trees and vegetation removed can be salvaged for reuse if meeting requirements for material for Brush Pile or Habitat logs, material for that purpose can be stockpiled for later use.

Trees shall be removed at the locations shown on the plans and disposed offsite or if meeting requirements for material for Habitat Brush Pile or Habitat logs, then material for that purpose can be stockpiled for later use.

The Contractor shall not clear and grub materials outside of these limits unless authorized to do so by the Project Representative. All items disturbed outside the clearing and grubbing limits and not called out for removals shall be replaced at the expense of the Contractor.

The Contractor shall delimb or prune tree branches or bushes that extend into trail or shoulder surface and maintain minimum of 10-foot vertical clearance from the trail surface and all other improvements installed by the Contractor. This work must be performed by an ISA Certified Arborist/Municipal Specialist.

All replacements shall be inspected and approved prior to planting. Planting procedures will be subject to approval. All replacements shall be guaranteed to survive in a healthy condition.

The Contractor shall be responsible for the protection of tops, trunks, and roots of existing trees that are to remain on the project site. Heavy equipment or stockpiles shall not be allowed within the branch canopy. The Contractor shall remove interfering branches without injury to the tree trunks.

Grading Around Trees: Where excavating, or filling within the branch spread of trees that are to remain, the work shall be performed as follows:

1. *Trenching:* When trenching occurs around trees to remain, the tree roots shall not be cut, but the trench shall be tunneled under or around the roots by careful hand-digging and without injury to the roots.
2. *Raising Grades:* When the existing grade at tree is below the new finished grade, and fill not exceeding 16 inches is required, clean washed gravel graded from one- to two-inch size shall be placed directly around the tree trunk. The gravel shall extend out from trunk on all sides a minimum of 18 inches and finish approximately two inches above the finished grade at tree. Install gravel and cover with filter fabric before any earth fill is placed. New earth fill shall not be left in contact with the trunks of any trees requiring fill.

Trees marked for preservation that are buried in fills over 16 inches deep shall have an open dry well of durable masonry (without mortar) situated at least 12 inches from the tree trunk. All wells are to be properly drained. Before fills of over 16 inches are made upon the tree root areas, it is advisable to spread at least a six-inch minimum layer of broken stone or coarse gravel covered by inverted sod shall be spread to facilitate proper drainage and aeration.

3. *Lowered Grades:* Existing trees in areas where the new finished grade is to be lowered, shall have regrading work done by hand to elevation as indicated. Roots as required shall be cut cleanly three inches below finished grade. Trees marked for preservation that are located more than six inches above proposed grades shall stand on broad rounded mounds and be graded smoothly into the lower level. Exposed or broken roots shall be cut clean and covered with topsoil.

Unwanted Vegetation Control

The Contractor shall control all unwanted vegetation within the mitigation and clearing line limits in locations shown in the plans by selective herbicide treatment and clearing and

grubbing. Herbicide treatment shall be per requirements of the **Herbicide Applications Prior to Clearing and Grubbing** section herein and in accordance with the standard requirements for clearing and grubbing under Section 2-01.3, except existing topsoil or organic matters shall be left in place. All removal of unwanted vegetation shall be done by hand or with handheld power tools, unless otherwise approved by the Engineer. Protection limits for trees and native growth to remain in the planting areas, other than the unwanted vegetation, shall be flagged and approved by the Project Representative prior to clearing and grubbing.

Unwanted vegetation species are as listed in the **Herbicide Applications Prior to Clearing and Grubbing** section herein.

This list of unwanted vegetation is not a complete list of weeds to be controlled within the project limits. The site may also include other invasive and competitive vegetation, as determined by the Engineer, which shall be controlled as ordered by the Engineer.

If unwanted vegetation grows back after the initial clearing and grubbing completes and before the acceptance of the project, the Contractor shall remobilize and remove unwanted vegetation in the mitigation planting areas as requested by the Project Representative and at the Contractor's expense. No additional compensation will be made.

Clearing

Within the clearing limits near elevated structures as shown in the Plans, the Contractor shall remove and dispose of all unwanted vegetation from the surface such as trees, brush, down timber, or other natural material that obstructs the construction of boardwalk and equipment access, per Section 2-01.3(1). No grubbing and dredging are allowed within the clearing limits. Temporary impacts from the clearing activities within wetlands shall be restored in accordance to the permit conditions in Appendix B.

(NWR September 12, 2019, Option 1)

The Contractor shall protect the root systems of the existing vegetation designated to be saved during clearing and grubbing activities. The Contractor shall conduct operations so vehicles and equipment do not operate, haul, park, or perform other activity within the drip line of vegetation designated to be saved.

*(*****)*

Removing Tree Outside Clearing and Grubbing Limits

Trees shall be removed at the locations shown on the plans and disposed offsite.

(NWR September 12, 2019, Option 1)

Herbicide Applications Prior to Clearing and Grubbing

The Contractor shall treat the living unwanted vegetation within clearing and grubbing limits or where shown in the Plans as defined below. Treatment shall be with an approved herbicide two times prior to vegetation and soil disturbance within the specified site.

Unwanted Vegetation

In addition to noxious weeds, unwanted vegetation within roadside and mitigation areas throughout the project limits includes:

- Butterfly bush (*Buddleia* spp.)
- Canadian thistle (*Cirsium arvense*)
- Common reed (*Phragmites australis*)
- Evergreen blackberry (*Rubus laciniatus*)
- Giant hogweed (*Heracleum mantegazzianum*)
- Hedge bindweed (*Calystegia sepium*)
- Himalayan blackberry (*Rubus discolor* or *R. procerus*)
- Knotweed (*Polygonum cuspidatum*, *P. bohemicum*, *P. sachalinense*, *P. polystachyum*)
- Purple loosestrife (*Lythrum salicaria*)
- Reed Canarygrass (*Phalaris arundinacea*)
- Scotch broom (*Cytisus scoparius*)
- ***English holly (*Ilex aquifolium*)***

The Contractor shall include the proposed timing of this Work in the progress schedule in accordance with Section 1-08.3. The Contractor shall submit the Weed and Pest Control Plan as specified in Section 8-02.3(2)B prior to beginning this Work.

The Contractor shall make herbicide applications between March 1 and September 30. Two weeks or more after the first herbicide application and prior to clearing and grubbing, the Contractor shall cut and clear dead vegetation to ground level and dispose of it outside of the project limits.

The Contractor shall make the second herbicide application after eight weeks or when the vegetation has regrown to a minimum of six inches in height, whichever comes first. The second application shall be performed after vegetation is showing new herbaceous growth and a minimum of two weeks prior to clearing and grubbing at the specified site.

Herbicide applications shall be performed in accordance with the requirements of Section 8-02.3(3) and the approved Weed and Pest Control Plan.

Care shall be taken to prevent herbicide damage to existing vegetation identified to be saved and protected as shown in the Plans.

2-01.4 Measurement (*****)

Section 2-01.4 is supplemented with the following:

Clearing and Grubbing, Unwanted Vegetation Control, and Clearing will be measured per acre based on digital survey mapping recorded previous to the award of this contract.

Removing tree outside clearing and grubbing limits shall be measured per each.

2-01.5 Payment
(*****)

Section 2-01.5 is supplemented with the following:

“Clearing and Grubbing”, per acre.

The unit Contract price per acre for “Clearing and Grubbing” shall include the costs for all work described in this section as clearing and grubbing, including herbicide applications prior to clearing and grubbing, protection of existing trees, delimiting, root pruning and shearing of trees and shrubs to maintain clearances described on the Plans.

“Unwanted Vegetation Control”, per acre.

The unit Contract price per acre for “Mitigation Clearing and Grubbing” shall be full pay for all Work described in this section including Herbicide Applications Prior to Clearing and Grubbing.

“Clearing”, per acre.

The unit Contract price per acre for “Clearing” shall be full pay for all Work described in this section.

“Removing Tree Outside C&G Limits”, per each

The unit Contract price per each tree for “Removing Tree Outside C&G Limits” shall be full pay for all Work described in this section.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description
(*****)

Section 2-02.1 is supplemented with the following:

This work shall consist of removing all materials noted in this section of the Special Provisions as well as any other materials designated for removal on the Plans or necessary for the construction of this project for which a specific Bid item is not provided in the Proposal.

Other works shall also include removing of cement concrete pavement, asphalt concrete pavement, cement concrete curb and gutter, water line, gravel surface, fire hydrant assembly including tapping sleeve and valve assembly, timber bridge, pedestrian barrier, and chain link fence.

2-02.3 Construction Requirements
(*****)

Section 2-02.3 is supplemented with the following:

Existing storm drainage pipe sections and structures noted for removal shall be completely removed and the cavity filled with crushed surfacing base course compacted to 95 percent of the maximum density.

(September 7, 2021 WSDOT GSP, Option 1)

Removal of Obstructions

The following miscellaneous Obstructions shall be removed and disposed of:

*** Wood post
Flag Holder Post and Signs
Wooden Curb
Storm pipe
Drainage Structure
Wood Bollards
Gravel Surface
Wooden Fence/Gate ***

2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters
(*****)

Section 2-02.3(3) shall be supplemented with the following:

The thickness of any existing pavements throughout the project is unknown and may vary. Removal shall be accomplished by making a neat longitudinal vertical full depth cut along the boundaries of the area to be removed. All cuts shall be continuous and shall be made with a self-propelled saw capable of cutting to a 12-inch depth. The use of pneumatic hammers or punches will not be permitted. All saw cutting shall be included in other bid items.

Add the following new subsections:

2-02.3(4) Adjustment of Utilities
(*****)

New Section

All utility covers, including drainage, which are located on proposed asphalt sections, shall be temporarily placed at subgrade elevation prior to placing crushed surfacing material.

Final adjustment of all covers and access entries shall be made following final paving by:

1. Saw-cutting of the pavement around lids and covers. Opening should not be larger than 12 inches beyond the radius of the cover.
2. Removing base material, surfacing course, and frame; adding raising bricks; replacing frame and cover no higher than finished grade of pavement and no lower than one-quarter inch below the pavement.

3. Filling and mechanically compacting around the structure and frame with crushed surfacing material or ATB ,or placing in 5-inch minimum thickness of cement concrete Class 4000 to within 2 inches of the top.
4. Filling the remaining 2 inches with HMA compacted and sealed to provide a dense, uniform surface.
5. Final adjustment of all covers and access entries shall be completed within 30 days of final paving.

2-02.3(7) Remove Existing Fire Hydrant Assembly

New Section

The existing fire hydrant assembly shall be removed, salvaged, and returned to the City of Lynnwood. Removal of the existing hydrant shall not be completed until after the new fire hydrant assembly is installed, tested, accepted, and operational. The existing fire hydrant assembly and hydrant spool shall be removed at point of connection to the existing water main. Contractor shall dispose of all removed items except the hydrant. A blind flange or MJ plug shall be installed on the existing gate valve which shall be closed and left in place. Backfill the affected area with native material and gravel borrow unless otherwise directed by the Engineer.

2-02.4 Vacant
(*****)

Section 2-02.4, including title, is replaced with the following:

2-02.4 Measurement

No specific unit of measurement will apply to the lump sum bid items “Removal of Structures and Obstructions” and “Timber Bridge Removal”.

“Removing Asphalt Conc. Pavement” will be measured by the square yard, regardless of depth or location.

“Removing Cement Conc. Pavement” will be measured by the square yard, regardless of depth or location.

“Removing Cement Conc. Curb and Gutter” and “Removing Cement Conc. Curb” will be measured by the linear foot. Removal of extruded curbs will be measured under “Removing Cement Conc. Curb”

Sawcutting (full depth) for removal or adjustment of any material or item will be considered incidental to the other bid items and will not be measured.

“Removing Water Line” will be measured by the linear foot.

“Removing Chain Link Fence” will be measured by the linear foot removed and disposed, regardless of height, including the foundations.

“Removing Fire Hydrant Assembly” shall be measured per each.

“Removal of Pedestrian Barrier” shall be measured by linear foot removed and disposed, including the foundations.

2-02.5 Payment
(*****)

Section 2-02.5 shall be supplemented with the following:

“Removal of Structures and Obstructions”, lump sum.

The costs associated with the removal and disposal of the items shall be included in the lump sum bid price for “Removal of Structure and Obstructions”.

“Removing Asphalt Conc. Pavement”, per square yard.

“Removing Cement Conc. Pavement”, per square yard.

“Removing Cement Conc. Curb and Gutter” and “Removing Cement Conc. Curb”, per linear foot.

The unit bid price for all of the above noted bid items will be full compensation for the costs of all labor, tools, equipment, and materials necessary or incidental to remove, haul, and dispose of all removed materials, including saw cutting and provision and placement of backfill materials.

“Removing Water Line”, per linear foot.

The unit bid price for the bid item will be full compensation for the costs of all labor, tools, equipment, and materials necessary or incidental to drain existing water main, cut, remove, haul, and dispose of all removed materials, including placement of backfill materials.

“Removing Chain Link Fence”, per linear foot.

“Removal of Pedestrian Barrier”, per linear foot

The unit bid price for all of the above noted bid items will be full compensation for the costs of all labor, tools, equipment, and materials necessary or incidental to remove, haul, and dispose of all removed materials and foundations and placement of backfill materials.

“Removing Fire Hydrant Assembly”, per each.

The unit bid price for all of the above noted bid items will be full compensation for the costs of all labor, tools, equipment, and materials necessary or incidental to remove, salvage, haul, and dispose of all removed materials and placement of backfill materials.

“Timber Bridge Removal”, per lump sum.

The costs associated with the removal and disposal of the bridge and foundations shall be included in the lump sum bid price for “Timber Bridge Removal”. Placement of backfill materials for the foundations shall also be included in this lump sum bid item.

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.3 Construction Requirements (*****)

Section 2-03.3 is supplemented with the following:

Existing utilities shall be protected during excavation and compaction operations. The Contractor shall exercise care when excavating and compacting next to the utilities to remain. If damage to these the utilities is a result of the Contractor's operations, the Contractor shall replace the damaged items at the Contractor's expense to the satisfaction of the Engineer.

2-03.3(3) Excavation Below Subgrade (*****)

The third paragraph is revised to read:

Sub Excavation – At any time, the Engineer may order excavation below Subgrade to remove soft, unsuitable material. The material shall be replaced in accordance with Section 2-03.3(14)E.

2-03.3(14) Embankment Construction

2-03.3(14)C Compacting Earth Embankments

(*****)

Section 2-03.3(14)C is supplemented with the following:

Compaction shall be by Method C, unless specified otherwise in other sections of these Special Provisions.

2-03.4 Measurement (*****)

Section 2-03.4 is supplemented with the following:

Only one determination of the original ground elevation will be made on this project. Measurement for roadway excavation and embankment will be based on the original ground elevations recorded previous to the award of this Contract, and the alignment, profile, grade and roadway section as shown in the Plans and as staked by the Engineer. Control stakes will be set during construction to provide the Contractor with all essential information for the construction of excavation and embankments.

Earthwork quantities will be computed, either manually or by means of electronic data processing equipment, by use of the average end area method.

The preliminary ground section drawings used for study and design of this project are available for inspection as reference material upon request.

Upon award of the contract, copies of the original ground cross sections will be furnished to the successful Bidder on request of the Project Engineer.

No specific unit of measurement will apply to the force account item of "Unsuitable Subgrade Preparation".

2-05 VACANT

Section 2-05, including heading, is replaced with the following:

2-05 POTHOLING
(October 16, 2017, Lynnwood GSP)

2-05.1 Description

This Section specifies work requirements for potholing ahead of construction to identify any potential or actual conflicts (horizontal and/or vertical) or other potential or actual physical separation or tolerance issues between the new construction and existing buried facilities.

Potholing shall be for the sole purpose of identifying utility conflicts affecting the alignment of the proposed construction, and for gathering sufficient information to develop a redesign of the proposed construction to avoid the potential conflict. Potholing is not for the purpose of verifying or supplementing pavement markings applied by one-call responders for the Contractor's convenience. Nothing in this specification relieves the Contractor from his responsibilities under RCW 19.122. The relationship between the Contractor and one-call responders representing various utilities is defined in RCW 19.122, and takes precedence over this specification.

The Work shall consist of sawcutting and removal of existing pavement, excavation to the depth required to expose the conflicting utility(ies), including disposal of spoils, shoring, if required, gathering sufficient information about the conflicting utility for avoidance design, backfilling and compacting the excavation and providing a temporary or permanent repair to the surface.

2-05.2 Materials

Materials shall meet the requirements of the following sections:

Controlled Density Fill (CDF)	2-09.3(1)E
Bank Run Gravel for Trench Backfill	9-03.19
Bedding Sand	9-03.13
Hot Mix Asphalt	5-04
Cement Concrete Sidewalks	COL Std. Plan 3-10
Cement Concrete Curb & Gutter	COL Std. Plan 3-6

The grade of paving asphalt shall be as required by the contract.

2-05.3 Construction Requirements

2-05.3(1) Preparatory Work

Potholing, as required, shall take place at least five (5) working days ahead of construction. As required by RCW 19.122, Contractor shall contact the Utility Location Request Center (one-call center) (1-800-424-5555 or 811) sufficiently in advance to allow utility locates to be marked in the construction zone prior to potholing. The Engineer, in consultation with the Contractor and Consultant (if any), shall determine the locations of potholes. The decision of the Engineer with regard to potholing locations is final.

2-05.3(2) Potholing

The Contractor shall pothole at the locations designated by the Engineer. The Contractor may pothole at other locations to comply with RCW 19.122, but such potholing will be considered for the convenience of the Contractor and no payment will be made. Such potholing, if made, will be performed in accordance with this specification.

The Contractor shall notify the Engineer at least one (1) working day in advance, each time potholing will occur, as to the date, time and location that potholing will be conducted. Each pothole designated to be investigated by the Engineer shall be at least two (2) feet square. When pavement, sidewalk or curb and gutter at the pothole location is to remain subsequent to construction, it shall be saw-cut full depth regardless of pavement thickness and carefully removed to avoid spalling of the edges of the pothole. Sidewalk and curb and gutter shall be removed to the nearest joint. If spalling occurs, the Contractor shall, prior to pavement patching, saw-cut outside the spalled area to provide a vertical face for the full depth of the pavement patch at no additional cost to the Contracting Agency, and payment will be made only to the original dimensions of the pothole. For pavement that will be ultimately removed by construction of the improvement, the Contractor may select the means for pavement removal, but payment will not be made for pavement removed outside the lines designated by the Engineer.

Excavation shall be by hydro-excavation, using truck-mounted eductor equipment, to a sufficient depth to expose and identify conflicts to the proposed horizontal and vertical alignment of the improvement. Measurements shall be made to the existing conflicting underground facilities in sufficient detail (station and offset from project control line, depth below pavement surface, size and content of pipe) that the exact location can readily be identified in relation to the proposed improvement. Location notes prepared by the Contractor shall be provided to the Engineer within one (1) working day of the potholing. If notes for more than one location are provided at the same time, the Contractor shall prioritize the location notes based on the scheduling needs of his operation.

Each pothole excavated shall be backfilled using Bank Run Gravel for Trench Backfill (section 9-03.19). When sand bedding is required by the owner of the exposed pipe, sand meeting the requirements of section 9-03.13, or equivalent, shall be used. Backfill shall be placed and compacted in twelve inch (12") maximum lifts to within three feet (3') of the surface, then six inch (6") lifts to the top of subbase. When the pothole is in a paved area, including sidewalks or curb and gutter, to be disturbed by the improvement, each backfill lift shall be compacted to 90 percent of maximum density as specified in section 2-03.3(14)D. Four inches (4") of cold mix asphalt will be applied as the surface material.

For potholes in paved areas, including sidewalks, curbs and gutters, which will not be disturbed by the improvement, each backfill lift shall be compacted to 95 percent of maximum density as specified in section 2-03.3(14)D. Alternatively, the Engineer may require the excavation to be backfilled with controlled density fill (CDF). Base course and pavement thicknesses for asphalt paved areas shall comply with those set forth in City of Lynnwood Standard Plan [3-18A](#). Base course and pavement thicknesses for sidewalk areas shall comply with those set forth in City of Lynnwood Standard Plan [3-10](#). Curb and gutter shall comply with City of Lynnwood Standard Plan 3-6.

When the pothole is not in a paved area, surface material existing prior to potholing (sod, bark, etc.) shall be replaced in kind at no additional expense to the City.

2-05.3(3) Avoidance Design

Within two (2) working days following the receipt of location notes from the Contractor, the Engineer will determine whether a redesign of the proposed improvement with the highest scheduling priority as determined by the Contractor is required or not. If required, a design to avoid the conflicting underground facility will be provided. Determinations related to other location notes submitted at the same time will follow at one (1) working day intervals until all conflicts from that submittal are resolved. Subsequent submittals of location notes resulting from further potholing shall follow the same pattern, with the pothole location having the highest scheduling priority as determined by the Contractor, being addressed first.

No work other than trenching, dewatering and trench wall stabilization may be performed within twenty feet (20') of a conflicting underground facility location until such time as it has been determined that a redesign is not necessary, or a revised design for that location has been received by the Contractor. If a revised design is required, the work shall proceed on a force account basis. Credits for deleted work shall be determined as set forth in section 1-09.5.

2-05.4 Measurement

Potholing will be measured per vertical foot of depth, as measured in the field, from the surface of the ground to the lowest extremity of the conflicting underground facility for each two-foot square module excavated, as measured at the surface of the ground. Should the Engineer require the excavated hole be expanded, the pothole will be measured as whole or fractional parts of the basic module (four square feet) times depth as provided above.

2-05.5 Payment

For locations approved by the Engineer, payment will be made for the following Bid item when included in the Proposal:

“Potholing”, per vertical foot

The unit contract price per vertical foot for “Potholing” shall be full payment for all labor, materials, equipment and incidentals required to complete the work as directed by the Engineer and as specified herein, including full depth sawcutting regardless of pavement thickness, removal and disposal of pavement, excavation, including disposal of spoils,

shoring, location measurement, backfill, compaction and surface repair, for each two-foot square potholing module, or fractional part thereof.

No payment will be made for Potholing accomplished by the Contractor in compliance with RCW 19.122. Such Potholing shall be considered incidental to the contract and the costs thereof shall be included as part of, and incidental to, other bid items.

END OF DIVISION 2

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DIVISION 4

BASES

4-04 BALLAST AND CRUSHED SURFACING

4.04.1 Description (*****)

Section 4-04.1 is supplemented with the following:

This Work shall consist of placing 1/4-inch crushed ledge rock for trail shoulders at locations shown in the Plans.

4-04.2 Materials (*****)

Section 4-04.2 is supplemented with the following:

1/4-Inch Crushed Ledge Rock 9-03.9(6)

If recycled materials will be used for crushed surfacing base, proposed recycled materials are subject to review, approval, and testing as required by the Engineer, prior to construction.

4-04.3 Construction Requirements

4-04.3(5) Shaping and Compaction (March 9, 2016 APWA GSP)

Supplement this section with the following:

Immediately following spreading and final shaping each layer of surfacing shall be lightly compacted in one lift until no visible movement of aggregate is observed resulting in a firm and unyielding condition, as determined by the Engineer.

4-04.4 Measurement (*****)

Section 4-04.4 is supplemented with the following:

1/4-Inch Crushed Ledge Rock shall be measured by the ton.

4-04.5 Payment (*****)

Section 4-04.5 is supplemented with the following:

“1/4-Inch Crushed Ledge Rock”, per ton.

The unit contract price per ton for "1/4-Inch Crushed Ledge Rock" shall be full compensation for all costs incurred for furnishing, portioning, loading, hauling, placing, and compacting the materials.

END OF DIVISION 4

DIVISION 5

SURFACE TREATMENTS AND PAVEMENTS

5-04 HOT MIX ASPHALT (July 18, 2018 APWA GSP)

Delete Section 5-04 and amendments, Hot Mix Asphalt and replace it with the following:

5-04.1 Description

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

(May 15, 2020 Lynnwood GSP)

5-04.2 Materials

Revise fourth paragraph to read:

The Contractor may use up to 20 percent RAP by total weight of HMA. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

(July 18, 2018 APWA GSP)

Materials shall meet the requirements of the following sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Portland Cement	9-01
Sand	9-03.1(2)
(As noted in 5-04.3(5)C for crack sealing)	
Joint Sealant	9-04.2
Foam Backer Rod	9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the

documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01.

Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

5-04.2(1) How to Get an HMA Mix Design on the QPL

If the contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design – Obtaining Project Approval

No paving shall begin prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the contract documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.**

The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL's) appropriate for the required use.

5-04.2(2)B Using Warm Mix Asphalt Processes

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55°F	45°F
0.10 to .20	45°F	35°F
More than 0.20	35°F	35°F

5-04.3(2) Paving Under Traffic

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

All costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, shall be included in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

Plants used for the preparation of HMA shall conform to the following requirements:

1. **Equipment for Preparation of Asphalt Binder** – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for

the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

2. **Thermometric Equipment** – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.
3. **Heating of Asphalt Binder** – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.
4. **Sampling and Testing of Mineral Materials** – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).
5. **Sampling HMA** – The HMA plant shall provide for sampling HMA by one of the following methods:
 - a. A mechanical sampling device attached to the HMA plant.
 - b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

A Material Transfer Device/Vehicle (MTD/V) shall only be used with the Engineer's approval, unless otherwise required by the contract.

Where an MTD/V is required by the contract, the Engineer may approve paving without an MTD/V, at the request of the Contractor. The Engineer will determine if an equitable adjustment in cost or time is due.

When used, the MTD/V shall mix the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the Engineer.

To be approved for use, an MTV:

1. Shall be self-propelled vehicle, separate from the hauling vehicle or paver.
2. Shall not be connected to the hauling vehicle or paver.
3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
4. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
5. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, an MTD:

1. Shall be positively connected to the paver.
2. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
3. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
4. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

5-04.3(3)E Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor's operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal all cracks 1/4 inch in width and greater.

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

Sand Slurry: For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to

cure. Top off cracks that were not completely filled with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

The sand slurry shall consist of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per section 9-03.1(2). The components shall be thoroughly mixed and then poured into the cracks and joints until full. The following day, any cracks or joints that are not completely filled shall be topped off with additional sand slurry. After the sand slurry is placed, the filler shall be struck off flush with the existing pavement surface and allowed to cure. The HMA overlay shall not be placed until the slurry has fully cured. The requirements of Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

In areas where HMA will be placed, use sand slurry to fill the cracks.

In areas where HMA will not be placed, fill the cracks as follows:

1. Cracks 1/4 inch to 1 inch in width – fill with hot poured sealant.
2. Cracks greater than 1 inch in width – fill with sand slurry.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)A2 Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

5-04.3(4)A3 Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

- A. Cracks 1/4 inch to 1 inch in width - fill with hot poured sealant.
- B. Cracks greater than 1 inch in width – fill with sand slurry.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the

Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates and RAP

Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the

Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1"	0.35 feet
HMA Class 3/4" and HMA Class 1/2"	
wearing course	0.30 feet
other courses	0.35 feet
HMA Class 3/8"	0.15 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

For Aggregates in the mixture:

- a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

- b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. **Job Mix Formula Adjustments** – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and

may require the development of a new mix design if the adjustment exceeds the amounts listed below.

- a. **Aggregates** –2 percent for the aggregate passing the 1½", 1", ¾", ½", ⅜", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).
- b. **Asphalt Binder Content** – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A subplot shall be equal to one day's production or 800 tons, whichever is less except that the final subplot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per subplot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall to be tested.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer’s discretion.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a Composite Pay Factor (CPF) shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of Va will at the option of the Contracting Agency. If tested, compliance of Va will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a Composite Pay Factor (CPF) using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	Factor “f”
All aggregate passing: 1½", 1", ¾", ½", ⅜" and No.4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(9)C7 Mixture Nonstatistical Evaluation – Retests

The Contractor may request a subplot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, Va. The results of the retest will be used for the acceptance of the HMA in place of the original subplot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of \$500 per sample.

5-04.3 (9)D Mixture Acceptance – Commercial Evaluation

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(10) HMA Compaction Acceptance

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level

of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item "Roadway Core" the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item "Roadway Core" the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a subplot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the subplot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the subplot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the subplot have been

provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of \$200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)A HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B HMA Compaction – Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and when doing so will follow WSDOT SOP 733. A \$500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A subplot shall be equal to one day's production or 400 tons, whichever is less except that the final subplot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per subplot per WSDOT T 738.

The subplot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each subplot, with one test per subplot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a subplot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection – A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal subplot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection – An Entire Sublot

An entire subplot that is suspected of being defective may be rejected. When a subplot is rejected a minimum of two additional random samples from this subplot will be obtained. These additional samples and the original subplot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection – A Lot in Progress

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
3. When either the PFi for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than 1/2 of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)B Bridge Paving Joint Seals

5-04.3(12)B1 HMA Sawcut and Seal

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified on the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with the detail shown in the Standard Plan. Construct the sawcut in accordance with Section 5-05.3(8)B and the manufacturer's application procedure.

5-04.3(12)B2 Paved Panel Joint Seal

Construct the paved panel joint seal in accordance with the requirements specified in Section 5-04.3(12)B1 and the following requirement:

1. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than 1/4 inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or
2. Removal and replacement of the wearing course of HMA, or
3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of \$500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving planning (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing (Milling) Bituminous Pavement

The planning plan must be approved by the Engineer and a pre planning meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planning submittals.

Locations of existing surfacing to be planed are as shown in the Drawings.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor's planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

5-04.3(14)A Pre-Planing Metal Detection Check

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

In addition the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:
 - a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure, must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).
 - b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.
 - c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.
 - d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.
 - e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.
2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.
3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation's activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.
2. A copy of each intersection's traffic control plan.
3. Haul routes from Supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.
4. Names and locations of HMA Supplier facilities to be used.
5. List of all equipment to be used for paving.
6. List of personnel and associated job classification assigned to each piece of paving equipment.
7. Description (geometric or narrative) of the scheduled sequence of planing and of paving, and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.

8. Names, job titles, and contact information for field, office, and plant supervisory personnel.
9. A copy of the approved Mix Designs.
10. Tonnage of HMA to be placed each day.
11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both Paving Plan and for Planing Plan:
 - a. The actual times of starting and ending daily operations.
 - b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.
 - c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other contractors who may operate in the Project Site.
 - d. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.
 - e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.
 - f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed
 - g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2.
 - h. Description of how flaggers will be coordinated with the planing, paving, and related operations.

- i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.
 - j. Other items the Engineer deems necessary to address.
2. Paving – additional topics:
- a. When to start applying tack and coordinating with paving.
 - b. Types of equipment and numbers of each type equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type equipment as it relates to meeting Specification requirements.
 - c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.
 - d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.
 - e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

5-04.4 Measurement

HMA CI. ___ PG ___, HMA for ___ CI. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Roadway cores will be measured per each for the number of cores taken.

Preparation of untreated roadway will be measured by the mile once along the centerline of the main line Roadway. No additional measurement will be made for ramps, Auxiliary Lanes, service roads, Frontage Roads, or Shoulders. Measurement will be to the nearest 0.01 mile.

Soil residual herbicide will be measured by the mile for the stated width to the nearest 0.01 mile or by the square yard, whichever is designated in the Proposal.

Pavement repair excavation will be measured by the square yard of surface marked prior to excavation.

Asphalt for prime coat will be measured by the ton in accordance with Section 1-09.2.

Prime coat aggregate will be measured by the cubic yard, truck measure, or by the ton, whichever is designated in the Proposal.

Asphalt for fog seal will be measured by the ton, as provided in Section 5-02.4.

Longitudinal joint seals between the HMA and cement concrete pavement will be measured by the linear foot along the line and slope of the completed joint seal.

Planing bituminous pavement will be measured by the square yard.

Temporary pavement marking will be measured by the linear foot as provided in Section 8-23.4.

Water will be measured by the M gallon as provided in Section 2-07.4.

5-04.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

“HMA Cl. ___ PG ___”, per ton.

“HMA for Approach Cl. ___ PG ___”, per ton.

“HMA for Preleveling Cl. ___ PG ___”, per ton.

“HMA for Pavement Repair Cl. ___ PG ___”, per ton.

“Commercial HMA”, per ton.

The unit Contract price per ton for “HMA Cl. ___ PG ___”, “HMA for Approach Cl. ___ PG ___”, “HMA for Preleveling Cl. ___ PG ___”, “HMA for Pavement Repair Cl. ___ PG ___”, and “Commercial HMA” shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

“Preparation of Untreated Roadway”, per mile.

The unit Contract price per mile for “Preparation of Untreated Roadway” shall be full pay for all Work described under 5-04.3(4) , with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for “HMA Cl. ___ PG ___” which was used for patching. If the Proposal does not include a Bid item for “Preparation of Untreated Roadway”, the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

“Preparation of Existing Paved Surfaces”, per mile.

The unit Contract Price for “Preparation of Existing Paved Surfaces” shall be full pay for all Work described under Section 5-04.3(4) with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for “HMA Cl. ____ PG ____” which was used for patching. If the Proposal does not include a Bid item for “Preparation of Untreated Roadway”, the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

“Crack Sealing”, by force account.

“Crack Sealing” will be paid for by force account as specified in Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting Agency has entered an amount in the Proposal to become a part of the total Bid by the Contractor.

“Pavement Repair Excavation Incl. Haul”, per square yard.

The unit Contract price per square yard for “Pavement Repair Excavation Incl. Haul” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4) with the exception, however, that all costs involved in the placement of HMA shall be included in the unit Contract price per ton for “HMA for Pavement Repair Cl. ____ PG ____”, per ton.

“Asphalt for Prime Coat”, per ton.

The unit Contract price per ton for “Asphalt for Prime Coat” shall be full payment for all costs incurred to obtain, provide and install the material in accordance with Section 5-04.3(4).

“Prime Coat Agg.”, per cubic yard, or per ton.

The unit Contract price per cubic yard or per ton for “Prime Coat Agg.” shall be full pay for furnishing, loading, and hauling aggregate to the place of deposit and spreading the aggregate in the quantities required by the Engineer.

“Asphalt for Fog Seal”, per ton.

Payment for “Asphalt for Fog Seal” is described in Section 5-02.5.

“Longitudinal Joint Seal”, per linear foot.

The unit Contract price per linear foot for “Longitudinal Joint Seal” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12).

“Planing Bituminous Pavement”, per square yard.

The unit Contract price per square yard for “Planing Bituminous Pavement” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

“Temporary Pavement Marking”, per linear foot.

Payment for “Temporary Pavement Marking” is described in Section 8-23.5.

“Water”, per M gallon.

Payment for “Water” is described in Section 2-07.5.

“Job Mix Compliance Price Adjustment”, by calculation.

“Job Mix Compliance Price Adjustment” will be calculated and paid for as described in Section 5-04.3(9)C6.

“Compaction Price Adjustment”, by calculation.

“Compaction Price Adjustment” will be calculated and paid for as described in Section 5-04.3(10)D3.

“Roadway Core”, per each.

The Contractor’s costs for all other Work associated with the coring (e.g., traffic control) shall be incidental and included within the unit Bid price per each and no additional payments will be made.

“Cyclic Density Price Adjustment”, by calculation.

“Cyclic Density Price Adjustment” will be calculated and paid for as described in Section 5-04.3(10)B.

END OF DIVISION 5

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DIVISION 6
STRUCTURES

6-01 GENERAL REQUIREMENTS FOR STRUCTURES

6-01.2 Foundation Data
(*****)

Section 6-01.2 is supplemented with the following:

The log of test boring pages in the appendix are reproductions of the original Log of Test Boring for the test holes shown in the Plans.

The Contractor should review the geotechnical recommendations report prepared for this project. Copies of the geotechnical recommendations report are available for review by prospective bidders at the location specified in Section 1-02.4 as supplemented in these Special Provisions.

6-02 CONCRETE STRUCTURES

6-02.2 Materials
(*****)

Section 6-02.2 is supplemented with the following:

Steel Pile	6-05
Welded Wire Reinforcement	9-07
Bridge Railings	6-06

6-02.3 Construction Requirements

6-02.3(25) Prestressed Concrete Girders
(*****)

Change the third paragraph to read as follows:

The Contracting Agency does not intend to perform Quality Assurance Inspection.

Add the following to the various types of girders:

Hollow Core Slabs – Refers to precast, prestressed hollow core slabs that are machine extruded, with continuous open cores, in a casting yard under closely controlled mixing, placing, and curing conditions. The slabs shall be furnished in nominal 4 foot widths, and sawn to lengths as shown on the Drawings. Hollow core slab soffits shall have a smooth steel-formed finish.

6-02.4 **Measurement**
(*****)

Section 6-02.4 is supplemented with the following:

The Hollow Core Concrete Boardwalk (Boardwalk #1) will be measured by the square foot.

No separate measurement will be made for the following:

- Structure excavation class A including haul
- Compacted gravel backfill for walls
- Compacted aggregate for gravel base
- Furnishing and driving steel piles
- Furnishing, driving, and testing one test pile
- Form and pour the cast-in-place caps and abutments including all reinforcement and incidental items
- Procuring, transporting, and erecting the Hollow Core Slabs
- Grouting keyways and installing poured joint filler
- Furnishing and installing neoprene bearing strips
- Furnish, place and splice the Welded Wire Reinforcement, and additional reinforcement in the closure pours between Hollow Core slabs and at the abutments
- Cast-in-place concrete topping including closure pours between Hollow Core Slabs, at the abutments and void fills
- Install embedments (supplied by the rail manufacturer) for the guardrail post attachment and pour void fill
- Procure and install FRP rail system
- Procure and install the galvanized welded wire reinforcement in-fill panels
- Stamped shop drawings and structural calculations
- Procure and install the FRP plate soil retaining system at Boardwalk #1.

6-02.5 **Payment**
(*****)

Section 6-02.5 is supplemented with the following:

“Hollow Core Concrete Boardwalk (Boardwalk #1)”, per square foot.

The unit Contract price per square foot shall be full pay for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete Hollow Core Concrete Boardwalk as specified in Section 6-02.4 above.

6-03 STEEL STRUCTURES

6-03.1 Description (*****)

Section 6-03.1 is supplemented with the following:

This section includes the design, fabrication, supply, and installation of the prefabricated steel truss pedestrian bridge as shown and described in the contract drawings. The bridge shall be of steel construction and the supplier shall furnish all materials including the connection of steel members, FRP molded grating, rub rails, safety rail, toe plates and bearing system, and any ancillary items for a complete installation.

Bridge System Type

The style of the bridge shall be similar to the schematic elevation and details on the Contract Drawings.

Bridge shall be designed using transverse members as the main support beams with transverse stringers to support the decking.

Member Components

The prefabricated trusses shall carry the floor beams. All floor beam members shall be fabricated from structural tube sections. Other structural members shall be fabricated from structural steel shapes.

Rub Rails

Rub rails shall be connected to the bridge on the inside face of the truss. The handrail or rub rails shall be designed and detailed by the bridge manufacturer.

Safety Rail

A safety rail system shall be placed on the outside of the structure, spaced so as to prevent a 4-inch sphere from passing through the side truss for the full height of the side truss.

Camber

The bridge shall have a vertical camber dimension at mid span equal to 100 percent of the full dead load deflection rounded up to the next 1/4 inch.

Deck Material

Deck material shall consist of FRP molded grating (1.5 inch thick) as shown in the Plans and in accordance with 6-21. 2 Molded Grating.

Design Criteria

Pedestrian steel bridge shall be designed in accordance with IBC, latest edition, ASCE 7-16 minimum loads for buildings and other structures, ACI 318 latest edition, and the AASHTO Guide Specifications for Design of Pedestrian Bridges, Dated 2009.

Live Load = 90 psf uniform load.

Utility Loads = 10 plf

Snow Load = 25 psf uniform load.

Wind fatigue and seismic loading shall be in accordance with ASCE-7.

Rail System = 50 plf or a 200 lb concentrated load.

Vertical Deflection

The vertical deflection of the trusses and floor beams due to service pedestrian live load shall not exceed 1/360 of the span.

Horizontal Deflection

The horizontal deflection of the structure due to lateral wind loads shall not exceed 1/360 of the span length.

Minimum Thickness of Metal

The minimum thickness of all structural steel members shall be 3/16-inch nominal and be in accordance with the AISC Manual of Steel Constructions' "Standard Mill Practice Guidelines."

Vibrations

Vibration of the structure shall not cause discomfort or concern to the users of the bridges. To assure this, the fundamental frequency (f) of the pedestrian bridge in the vertical direction, without live load, shall be greater than 3.0 hertz (Hz) to avoid the first harmonic. The fundamental frequency of the pedestrian bridge in the lateral direction, shall be greater than 1.3 Hz. If the fundamental frequency cannot satisfy these limitations, then the bridge should be proportioned such that either of the following criteria are satisfied:

$$f > 2.86 * \ln(180/W)$$

or

$$W > 180 * e(-0.35 * f)$$

Where W is the weight of the bridge in kips and f is the fundamental frequency in the vertical direction in Hz.

6-03.2 Materials

(*****)

Section 6-03.2 is supplemented with the following:

Bridge shall be fabricated from high-strength, low-alloy, atmospheric corrosion-resistant ASTM A847 Cold-Formed welded square and rectangular tubing and/or ASTM A588, or ASTM A242, ASTM A606 plate and structural steel shapes (Fy = 50,000 psi).

The minimum corrosion index of atmospheric corrosion-resistant steel, as determined in accordance with ASTM G101, shall be 6.0.

All exposed surfaces of structural steel to be blast cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications No. 7, SSPC -SP7 brush-off blast cleaning to assure uniform weathering. Exposed surfaces of steel shall be defined as those surfaces seen from the deck or from the outside and bottom of the structure. All other surfaces to have standard mill finish.

All bolts, washers, and nuts shall be ASTM A325 Type 3.

Bolts used for the connection of the rub rail shall be ASTM A307 or SAE J429 Grade 2, 1/4-inch-diameter carriage bolts, zinc plated.

Rub Rail timber planks shall be Ipe wood (*Tabebuia* spp. -lapacho group), all heartwood (no sapwood), clear (no knots), straight grained, with no worm holes, surfaced 4 sides (S4S) and eased at four edges, and be air dried to no more than 20 percent moisture content prior to installation. Planks shall be untreated, except ends of planks shall be sealed with "Anchorseal" as manufactured by Mobil CER-M or an equal aqueous wax log sealer. Based on the Forest Products Laboratory value of 27,270 psi for Modulus of Rupture, Modulus of Elasticity of 3,030,000 psi and Maximum Crush Strength of 13,720 psi the following allowable stresses shall apply: Allowable bending stress without modification factors of 3,700 psi; allowable shear without modification factors of 320 psi.

Steel piling shall be in accordance with Section 6-05.

6-03.3 **Construction Requirements**
(*****)

Section 6-03.3 is supplemented with the following:

Fabrication

The Design Engineer shall affix their stamp to the Shop Drawings certifying all requirements have been met.

Welding procedures and weld qualification test procedures shall conform to the provisions of AWS D1.1. Filler metal shall be in accordance with the applicable AWS Filler Metal Specification and shall match the corrosion properties of the base metal.

Welders shall be certified in accordance with AWS Da.5 Flux Core Arc or Shielded Manual Arc Welding.

6-03.3(7) **Shop Plans**
(*****)

Section 6-03.3(7) is supplemented with the following:

The design Drawings and calculations shall be complete and shall contain all detailed information to allow for adequate review and approval. Design Drawings shall also include any special information regarding erection schemes and lifting requirements.

Submittal Drawings

Schematic Drawings and diagrams shall be submitted to the Owner for their review. Submittal Drawings shall be unique drawings, prepared to illustrate the specific portion of the work to be done. All relative design information such as member sizes, bridge reactions, and general notes shall be clearly specified on the drawings. Drawings shall have cross-reference details and sheet numbers. All drawings shall be signed and sealed by a Professional Engineer who is licensed in the State of Washington.

Structural Calculations

Structural calculations for the bridge superstructure shall be submitted by the bridge manufacturer and reviewed by the approving Engineer. All calculations shall be signed and sealed by a Professional Engineer who is licensed in the State of Washington. The calculations shall include all design information necessary to determine the structural adequacy of the bridge. The calculations shall include, as a minimum, the following:

- All checks for bending and shear forces in the critical members for each bridge member (floor beams, stringer, etc.) of the bridge.
- Checks for the critical connection failure modes for each bridge member type (floor beams, stringers, etc.).
- All bolted splice connections.
- All checks for the bridge bearing pads and anchor bolts including concrete failure modes.
- Bridge deflection checks.
- Welder certifications in compliance with AWS standard qualification tests.
- Welding procedures in compliance with Section 5.1.

Contractor shall provide a written warranty against defects in material and workmanship for a period of 5 years.

6-03.3(9) Handling, Storing, and Shipping of Materials (*****)

Section 6-03.3(9) is supplemented with the following:

The Contractor shall be responsible for the handling and protection of the bridge members after arrival at the destination. All bridge materials shall be unloaded and handled with a forklift or crane using nylon slings or other instruments to prevent damage or abrasion during the bridge placement.

If the bridge materials and elements are to be stored at the site, they must be placed on a level surface and must be adequately braced and supported to prevent warpage and twisting.

Any damage shall be reported immediately to the bridge manufacturer's engineering department.

(*****)

Add the following new subsections:

6-03.3(44) Pedestrian Bridge Installation

New Section

The pedestrian bridge shall be installed according to the manufacturer's shop details and installation documents. The Contractor shall set structural members and elements at elevations indicated on the Contract Drawings. The Contractor shall make provisions for

erection loads and provide temporary bracing to maintain the bridge true and plumb and in true alignment until the completion of the erection.

Prior to any field cutting, drilling, or alteration of structural members by the Contractor, the Contractor shall seek written approval from the prefabricated bridge company's Professional Engineer.

Unless specified otherwise, the bridge manufacturer shall determine the number, diameter, minimum grade, and finish of all anchor bolts. The anchor bolts shall be designed to resist all horizontal and uplift forces to be transferred by the superstructure to the supporting foundations. The Contractor shall design, provide, and install the anchor bolts in accordance with the manufacturer's anchor bolt spacing dimensions and loads.

Information as to bridge support reactions and anchor bolt locations will be furnished by the bridge manufacturer.

6-03.3(45) Bridge Supplier Qualifications

New Section

The bridge supplier must be a company specializing in the design and fabrication of pedestrian bridges with a minimum of 5 years of documented experience and ability to prepare structural plans in accordance with WAC Chapter 196-23.

A list of approved manufacturers includes (but not limited to):

CONTECH Engineered Solutions
9025 Centre Pointe Drive
West Chester, OH 45069
1-800-338-1122

Bridge Brothers Inc.
1962 Howell Mill Rd. NW, Suite 210
Atlanta, GA 30032
1-866-806-0847

True North Steel
702 13th Ave. E
West Fargo, ND 58078
1-866-982-9511

6-03.4 Measurement (*****)

Section 6-03.4 is supplemented with the following:

The Prefabricated Steel Bridge will be measured by the square foot.

No separate measurement will be made for the following items for “Prefabricated Steel Bridge”:

- Furnishing and driving steel piles at both abutments. Both Bridge abutments are shared by a FRP boardwalk. For estimating purposes, the Contractor shall assume both abutments are included in the cost of the prefabricated Steel Bridge.
- Form and pour both cast-in-place abutments including all reinforcement and incidental items.
- Pour the required grout pads and install the manufacturer supplied Steel Bearing Pads.
- Procure, store (if necessary), and erect the Prefabricated Steel Bridge.
- Install the FRP molded grating and transition plates.
- Structure Excavation Class A including Haul.
- Signed and stamped structural shop drawings and structural calculations.
- Costs associated with construction means and method for providing equipment access across and adjacent to the wetlands in accordance to permit conditions.

6-03.5 Payment

(*****)

Section 6-03.5 is supplemented with the following:

“Prefabricated Steel Bridge”, per square foot.

The unit Contract price per square foot shall be full pay for all costs for design, fabrication, delivery and installation of the bridge and foundation and other necessary incidentals including the means and method to provide the equipment access to complete Prefabricated Steel Bridge as specified in Section 6-03.4 above.

6-05 PILING

6-05.3 Construction Requirements

6-05.3(5) Manufacture of Steel Piles

(*****)

Section 6-05.3(5) is supplemented with the following:

Manufacture of St. Piling

Welding for steel pipe piling shall conform to AWS D1.1/D1.1M, latest edition, Structural Welding Code, and Section 6-03.3(25), except that all weld filler metal shall be low hydrogen material selected from Table 4.1 in AASHTO/AWS 6 D1.5M/D1.5:2010 Bridge Welding Code.

Welding and joint geometry for the seam, whether it be longitudinal or helical, shall be qualified in accordance with Clause 4, Qualification, of the AWS D1.1/D1.1M, latest edition, Structural Welding Code. In addition, charpy V-notch (CVN) testing in accordance with Clause 4, Part D, of the AWS D1.1/D1.1M, latest edition, Structural Welding Code, shall be performed. CVN

testing shall include five tests at 0 degrees F. The acceptance threshold for the five samples shall meet an average value of 20-foot-pounds CVN for the set of test coupons and a minimum value of 15-foot-pounds CVN for any individual test coupon. The Contractor may submit documentation of prior qualification to the Engineer to satisfy this requirement.

Dimensional tolerances shall conform to the material specification that the steel pipe piling is manufactured under, and, at a minimum, the following requirements:

1. Out-of-roundness shall be within 1 percent of the nominal outside diameter.
2. Deviation from a straight line, parallel to the centerline of the pile, shall not exceed 0.001 times the length of the pile.
3. The maximum radial offset of the strip/plate edges shall be 1/8 inch. The offset shall be transitioned with a taper weld and the slope shall not be less than a 1 in 2.5 taper.
4. The bead height of weld reinforcement shall not exceed 3/16 inch.
5. Misalignment of weld beads for double-sided welded pipe shall not exceed 1/8 inch.
6. The wall thickness shall not be less than 95 percent or greater than 110 percent of the specified nominal thickness.

All seams and skelp splices shall be complete penetration welds. Skelp splices in spiral welded (helical seam) pipe shall not be located within 12 inches of a girth shop or field weld.

All skelp splices shall be 100 percent radiographically or ultrasonically inspected in accordance with either API 5L Annex E Section E.4 or E.5, or Table 6.2 and Clause 6 Part E, F or G in AWS D1.1/D1.1M, latest edition, Structural Welding Code. Additionally, 10-percent of the total length of seam welds for both longitudinal and helical welded pipe, and one pipe diameter length of seam centered on any skelp splice intersection, shall be randomly inspected as specified above. If repairs are required in more than 10-percent of the welds examined, additional inspection shall be performed. The additional inspection shall be made on both sides of the repair for a length equal to 10 percent of the length of the pipe outside circumference. If repairs are required in more than 10 percent of welds examined in the second sample, 100 percent of the entire seam on the pile shall be inspected.

All seams and splices shall be 100 percent visually inspected in accordance with the acceptance criteria for statically loaded non-tubular connections in Table 6.1 of the AWS D1.1/D1.1M, latest edition, Structural Welding Code. Repairs shall conform to Section 5.26 of the AWS D1.1/D1.1M, latest edition, Structural Welding Code, using approved repair and weld procedures.

Each length of steel pipe pile shall be marked with paint stencil, no closer than 6 inches to the end of the pipe, with the name of the manufacturer, material specification and grade of pipe, steel heat number, nominal pipe diameter, and wall thickness.

6-05.3(6) Splicing Steel Casings and Steel Piles
(*****)

Section 6-05.3(6) is supplemented with the following:

Splicing St. Piling

Welding for steel pipe piling shall conform to AWS D1.1/D1.1M, latest edition, Structural Welding Code, and Section 6-03.3(25), except that all weld filler metal shall be low hydrogen material selected from Table 4.1 in AASHTO/AWS 6 D1.5M/D1.5:2010 Bridge Welding Code.

Welding and joint geometry for splices shall be qualified in accordance with Clause 4, Qualification, of the AWS D1.1/D1.1M, latest edition, Structural Welding Code. In addition, charpy V-notch (CVN) testing in accordance with Clause 4, Part D, of the AWS D1.1/D1.1M, latest edition, Structural Welding Code, shall be performed. CVN testing shall include five tests at 0 degrees F. The acceptance threshold for the five samples shall meet an average value of 20-foot-pounds CVN for the set of test coupons and a minimum value of 15-foot-pounds CVN for any individual test coupon. The Contractor may submit documentation of prior qualification to the Engineer to satisfy this requirement.

Ends of steel pipe piling shall be prepared for splicing in accordance with AWS D1.1/D1.1M, latest edition, Structural Welding Code.

All splices shall be complete penetration groove welds using continuous backing rings of 1/4-inch minimum thickness. Tack welds shall be located in the root of the complete penetration groove weld.

Shop splices shall be 100 percent visually and ultrasonically inspected in accordance with the acceptance criteria for statically loaded non-tubular connections in Table 6.1 and the acceptance criteria in Table 6.2 in AWS D1.1/D1.1M, latest edition, Structural Welding Code. Repairs for shop and field splices shall conform to Section 5.26 of AWS D1.1/D1.1M, latest edition, Structural Welding Code, using approved repair and weld procedures.

Field splice welds and welders shall be further qualified, tested and inspected as follows:

1. Welder qualification shall be performed on sample full girth sections of steel pipe pile to be used, in the same position and using the same weld joint as for production pile splicing.
2. Weld qualification tests shall be conducted in the presence of the Contractor's CWI and a representative of the Contracting Agency.
3. Field welded test joints for welder qualification shall be inspected as specified above for shop splices.
4. Production pile field splices shall be inspected as specified above for shop splices, within the limits designated for UT inspection as shown in the Plans. All welds shall be 100 percent visually inspected. The Engineer and the Contractor's CWI reserve the right to request UT inspection of splices in any pile location.

Quality control for field welding shall be conducted by an AWS Certified Welding Inspector (CWI). The Contractor shall not begin pile splicing operations until receiving the CWI's approval of the joint fit-up. The CWI shall inspect 100 percent of all field welds in accordance with the criteria and requirements specified above. All field splices shall have received the CWI's approval prior to Engineer acceptance.

The CWI shall prepare a Type 1 Working Drawing documenting the results of the nondestructive quality control inspection of all field welds, and shall submit the report to the Engineer within five working days of the completion of the final pile splice in the project or as otherwise requested by the Engineer.

6-05.3(10) Test Piles
(*****)

Section 6-05.3(10) is supplemented with the following:

The Contractor shall furnish and drive steel test piles at the following locations or at locations designated by the Engineer:

1 pile at Sta. 102+68.98 Hollow Core Concrete Boardwalk #1

1 pile at Sta. 115+06.73 FRP Boardwalk #2

1 pile at Sta. 120+41.26 FRP Boardwalk #3

For the three (3) test pile locations the Agency shall provide a Geotechnical Engineer to perform field observation to confirm the advanced outwash elevation, driving resistance and the estimated ultimate capacity.

At each location, the Contractor shall test the piles in accordance with the quick load test method as described in ASTM D 1143-81, under the direction of a qualified geotechnical engineer to confirm that the allowable bearing capacity of 30 kips for the FRP Boardwalks and 60 kips for the Hollow Core Concrete Boardwalk and the Prefabricated Steel Bridge have been achieved.

It is anticipated that the pile lengths shown on the drawings (increased by 4 percent, see following paragraph) will be of sufficient length to achieve the required capacity. If during test pile driving operations, it is determined that additional pile is required to achieve capacity, the test pile shall be replaced, or spliced, at the Contractor's expense per WSDOT Spec Section 6-05(10).

The pile lengths shown assume a 10-foot-0-inch embedment into the advanced outwash. However, to account for the possibility that the advance outwash elevation maybe slightly different than anticipated the Contractor, for estimating purposes, should add 4 percent to the pile lengths shown in these plans. Contractor shall not order permanent piles until test piles have been driven and the required length to achieve the required capacity has been confirmed.

Test piles may be used as production piles if they comply with the specified installation, capacity, and tolerance requirements.

6-05.3(11) Driving Piles

6-05.3(11)D Achieving Minimum Tip Elevation and Bearing
(August 3, 2015 WSDOT GSP, Option 2)

Section 6-05.3(11)D is supplemented with the following:

The areas where piles are to be driven are adjacent to highly developed areas. It is essential that vibration and noise resulting from pile driving be held to a minimum. Unless otherwise approved by the Engineer, pile driving shall be done during regular daytime working hours. The Contractor shall select pile driving equipment which will minimize noise and vibration. When, in the opinion of the Engineer, noise or vibration are excessive, the Contractor will be required to use a hammer that does not exceed the minimum specifications by more than 10 percent for the type and capacity of piling being driven. If pre-boring, jetting, or other special methods are not specified elsewhere in the contract and are ordered by the Engineer to reduce noise or vibration, such change in method shall be considered a change, subject to the terms of Section 1-04.4.

6-05.4 Measurement
(*****)

Change the first paragraph to read as follows:

No separate measurement will be made for furnishing and driving the steel piles or for the furnishing, driving, and testing of the test piles. Measurement is included in Sections 6-02.4, 6-03.4, and 6-21.4.

6-05.5 Payment
(*****)

All costs in connection with furnishing and driving the steel piles or for the furnishing, driving, and testing of the test piles shall be included in the unit contract price per square foot for the "Hollow Core Concrete Boardwalk (Boardwalk #1)", "Prefabricated Steel Bridge" and the "FRP Boardwalks (Boardwalks #2 and #3)".

6-06 BRIDGE RAILINGS

6-06.1 Description
(*****)

Section 6-06.1 is supplemented with the following:

This work shall consist of fabrication and construction of FRP pedestrian railing on both sides of the elevated boardwalk structures and on one side of the hollow core concrete boardwalk structure as shown on the Plans and these Specifications.

6-06.2 **Materials**
(*****)

Section 6-06.2 is supplemented with the following:

Material for the “FRP Pedestrian Railing for Boardwalk” shall be Pultruded fiberglass structural shapes in accordance with the Plans and 6-21.3 of these Special Provisions. The galvanized Welded Wire Mesh In-Fill Panels shall be in accordance with Section 9-07.7 and these Special Provisions.

Attachment materials shall be designed and supplied by the FRP designer/manufacturer.

Materials for pedestrian barrier shall be per City of Lynnwood standard details STD3-26B as shown in the Plans.

6-06.3 **Construction Requirements**
(*****)

Section 6-06.3 is supplemented with the following:

No guardrail shall be erected until the surface to which it is to be attached is completed.

Slip joints shall be as shown on the manufacturer’s drawings. Railing installed without slip joints will be rejected and the Contractor shall install new railing at its own expense.

6-06.4 **Measurement**
(*****)

Section 6-06.4 is supplemented with the following:

No separate measurement will be made for the fabrication and installation of the FRP Pedestrian Railing and the Welded Wire Mesh In-Fill Panels. Measurement is included in Sections 6-02.4 and 6-21.4.

Pedestrian barrier will be measured by the linear foot along the line and slope at the base of the completed railing.

6-06.5 **Payment**
(*****)

Section 6-06.5 is supplemented with the following:

All costs in connection with fabricating and installing the FRP Pedestrian Railing and the Welded Wire Mesh In-Fill Panels shall be included in the unit contract price per square foot for the “Hollow Core Concrete Boardwalk (Boardwalk #1)” and the “FRP Boardwalks (Boardwalks #2 and #3)”.

“Pedestrian Barrier”, per linear foot.

The unit contract price per linear foot for “Pedestrian Barrier” shall be full pay for furnishing all labor, tools, equipment, and materials required, including but not limited to, railing, welding,

attachment fittings, post foundations, shop drawings for railing, and overall adjustments true to line and grade and cleanup.

6-13 Structural Earth Walls

6-13.2 Materials

Section 6-13.2 is supplemented with the following:

(January 2, 2018 WSDOT GSP, Option 3)

Concrete Block Faced Structural Earth Wall Materials

General Materials

Concrete Block

Acceptability of the blocks will be determined based on the following:

1. Visual inspection.
2. Compressive strength tests, conforming to Section 6-13.3(4).
3. Water absorption tests, conforming to Section 6-13.3(4).
4. Manufacturer's Certificate of Compliance in accordance with Section 1-06.3.
5. Freeze-thaw tests conducted on the lot of blocks produced for use in this project, as specified in Section 6-13.3(4).
6. Copies of results from tests conducted on the lot of blocks produced for this project by the concrete block fabricator in accordance with the quality control program required by the structural earth wall manufacturer.

The blocks shall be considered acceptable regardless of curing age when compressive test results indicate that the compressive strength conforms to the 28-day requirements, and when all other acceptability requirements specified above are met.

Testing and inspection of dry cast concrete blocks shall conform to ASTM C 140, and shall include block fabrication plant approval by WSDOT prior to the start of block production for this project.

Mortar

Mortar shall conform to ASTM C 270, Type S, with an integral water repellent admixture as accepted by the Engineer. The amount of admixture shall be as recommended by the admixture manufacturer. To ensure uniform color, texture, and quality, all mortar mix components shall be obtained from one manufacturer for each component, and from one source and producer for each aggregate.

Geosynthetic Soil Reinforcement

Geogrid reinforcement shall conform to Section 9-33.1, and shall be a product listed in Appendix D of the current WSDOT Qualified Products List (QPL). The values of T_{ai} and T_{ult} as listed in the QPL for the products used shall meet or exceed the values

required for the wall manufacturer's reinforcement design as specified in the structural earth wall design calculation and working drawing submittal.

The minimum ultimate tensile strength of the geogrid shall be a minimum average roll value (the average test results for any sampled roll in a lot shall meet or exceed the values shown in Appendix D of the current WSDOT QPL). The strength shall be determined in accordance with ASTM D 6637, for multi-rib specimens.

The ultraviolet (UV) radiation stability, in accordance with ASTM D 4355, shall be a minimum of 70 percent strength retained after 500 hours in the weatherometer.

The longitudinal (i.e., in the direction of loading) and transverse (i.e., parallel to the wall or slope face) ribs that make up the geogrid shall be perpendicular to one another. The maximum deviation of the cross-rib from being perpendicular to the longitudinal rib (skew) shall be no more than 1 inch in 5 feet of geogrid width. The maximum deviation of the cross-rib at any point from a line perpendicular to the longitudinal ribs located at the cross-rib (bow) shall be 0.5 inches.

The gap between the connector and the bearing surface of the connector tab cross-rib shall not exceed 0.5 inches. A maximum of 10 percent of connector tabs may have a gap between 0.3 inches and 0.5 inches. Gaps in the remaining connector tabs shall not exceed 0.3 inches.

The Engineer will take random samples of the geogrid materials at the job site. Acceptance of the geogrid materials will be based on testing of samples from each lot. A "lot" shall be defined as all geogrid rolls sent to the project site produced by the same manufacturer during a continuous period of production at the same manufacturing plant having the same product name. The Contracting Agency will require 14 calendar days maximum for testing the samples after their arrival at the WSDOT Materials Laboratory in Tumwater, WA.

The geogrid samples will be tested for conformance to the specified material properties. If the test results indicate that the geogrid lot does not meet the specified properties, the roll or rolls which were sampled will be rejected. Two additional rolls for each roll tested which failed from the lot previously tested will then be selected at random by the Engineer for sampling and retesting. If the retesting shows that any of the additional rolls tested do not meet the specified properties, the entire lot will be rejected. If the test results from all the rolls retested meet the specified properties, the entire lot minus the roll(s) which failed will be accepted.

All geogrid materials which have defects, deterioration, or damage, as determined by the Engineer, will be rejected. All rejected geogrid materials shall be replaced at no expense to the Contracting Agency.

Except as otherwise noted, geogrid identification, storage and handling shall conform to the requirements specified in Section 2-12.2. The geogrid materials shall not be exposed to temperatures less than -20F and greater than 122F.

Drainage Geosynthetic Fabric

Drainage geosynthetic fabric shall be a non-woven geosynthetic conforming to the requirements in Section 9-33.1, for Construction Geotextile for Underground Drainage, Moderate Survivability, Class B.

Proprietary Materials

Allan Block Wall

Wall backfill material placed in the open cells of the precast concrete blocks and placed in the one to three foot zone immediately behind the precast concrete blocks shall be crushed granular material conforming to Section 9-03.9(3).

GEO WALL Structural Earth Retaining Wall System

Connection pins shall be fiberglass conforming to the requirements of Basalite Concrete Products, LLC.

KeyGrid Wall

KeyStone connection pins shall be fiberglass conforming to the requirements of Keystone Retaining Wall Systems, Inc.

Landmark Retaining Wall

Lock bars shall be made of a rigid polyvinyl chloride polymer conforming to the following requirements:

Property	Value	Specification
Specific Gravity	1.4 minimum	ASTM D 792
Tensile Strength at yield	2,700 psi minimum	ASTM D 638

Lock bars shall remain sealed in their shipping containers until placement into the wall. Lock bars exposed to direct sunlight for a period exceeding two months shall not be used for construction of the wall.

Mesa Wall

Block connectors for block courses with geogrid reinforcement shall be glass fiber reinforced high-density polypropylene conforming to the following minimum material specifications:

<u>Property</u>	<u>Specification</u>	<u>Value</u>
Polypropylene	ASTM D 4101	
	Group 1 Class 1 Grade 2	73 ± 2 percent
Fiberglass Content	ASTM D 2584	25 ± 3 percent
Carbon Black	ASTM D 4218	2 percent minimum
Specific Gravity	ASTM D 792	1.08 ± 0.04
Tensile Strength at yield	ASTM D 638	8,700 ± 1,450 psi
Melt Flow Rate	ASTM D 1238	0.37 ± 0.16 ounces/10 min.

Block connectors for block courses without geogrid reinforcement shall be glass fiber reinforced high-density polyethylene (HDPE) conforming to the following minimum material specifications:

<u>Property</u>	<u>Specification</u>	<u>Value</u>
HDPE	ASTM D 1248	
	Type III Class A Grade 5	68 ± 3 percent
Fiberglass Content	ASTM D 2584	30 ± 3 percent
Carbon Black	ASTM D 4218	2 percent minimum
Specific Gravity	ASTM D 792	1.16 ± 0.06
Tensile Strength at yield	ASTM D 638	8,700 ± 725 psi
Melt Flow Rate	ASTM D 1238	0.11 ± 0.07 ounces/10 min.

6-13.3 Construction Requirements

Section 6-13.3 is supplemented with the following:

(January 2, 2018 WSDOT GSP, Option 3)

Concrete Block Faced Structural Earth Wall

Concrete block faced structural earth walls shall be constructed of only one of the following wall systems. The Contractor shall make arrangements to purchase the concrete blocks, soil reinforcement, attachment devices, joint filler, and all necessary incidentals from the source identified with each wall system:

Allan Block Wall

Allan Block Wall is a registered trademark of the Allan Block Corporation

Allan Block Corporation
7424 W 78th Street
Bloomington, MN 55439
(800) 899-5309
FAX (952) 835-0013
www.allanblock.com

GEOWALL Structural Earth Retaining Wall System

GEOWALL is a registered trademark of Basalite Concrete Products, LLC

Basalite Concrete Products LLC
3299 International Place
Du Pont, WA 98327-7707
(800) 964-9424
FAX: (253) 964-5005
www.basalite.com

Redi-Rock Positive Connection System

Redi-Rock Positive Connection System is a registered trademark of Redi-Rock International, LLC

Redi-Rock International, LLC
05481 US 31 South
Charlevoix, MI 49720
(866) 222-8400
FAX (231) 237-9521
www.redi-rock.com

Mesa Wall

Mesa Wall is a registered trademark of Tensar Corporation

Tensar Corporation
2500 Northwinds Parkway Suite 500
Atlanta, GA 30009
(770) 334-2090
FAX (678) 281-8546
www.tensarcorp.com

Landmark Retaining Wall System

Landmark Retaining Wall System is a registered trademark of Anchor Wall Systems, Inc.

Anchor Wall Systems, Inc.
5959 Baker Road, Suite 390
Minnetonka, MN 55345-5996
(877) 295-5415
FAX (952) 979-8454
www.anchorwall.com

KeyGrid Wall

KeyGrid is a registered trademark of Keystone Retaining Wall Systems, Inc.

Keystone Retaining Wall Systems, Inc.
4444 West 78th Street
Minneapolis, MN 55435
(800) 747-8971
FAX (952) 897-3858
www.keystonewalls.com

6-13.3(2) Submittals

Section 6-13.3(2) is supplemented with the following:

(January 3, 2011 WSDOT GSP, Option 1)

The following geotechnical design parameters shall be used for the design of the structural earth wall(s):

Wall Name or No.: *** 1 and 2 ***

Soil Properties	Wall Backfill	Retained Soil	Foundation Soil
Unit Weight (pcf)	***135***	***135***	***100***
Friction Angle (deg)	***38***	***36***	***28***
Cohesion (psf)	***0***	***0***	***0***

For the Service Limit State, the wall shall be designed to accommodate a differential settlement of *** 1/2 *** per 100 feet of wall length.

For the Extreme Event I Limit State, the wall shall be designed for a horizontal seismic acceleration coefficient k_h of *** 0.222 *** g and a vertical seismic acceleration coefficient k_v of *** 0.0 *** g.

6-13.3(5) Precast Concrete Facing Panel and Concrete Block Erection

Section 6-13.3(5) is supplemented with the following:

(April 2, 2012 WSDOT GSP, Option 2)

Specific Erection Requirements for Precast Concrete Block Faced Structural Earth Walls

Landmark Retaining Wall

When placing each course of concrete blocks, the Contractor shall pull the blocks towards the front face of the wall until the male key of the bottom face of the upper block contacts and fits into the female key of the top face of the supporting block below.

A maximum gap of 1/8-inch is allowed between adjacent concrete blocks, except for the base course set of concrete blocks placed on the leveling pad. A maximum gap of 1-inch is allowed between adjacent base course concrete blocks, provided geosynthetic reinforcement for drains is in place over the gap at the back face of the concrete blocks.

Lock bars shall be installed in the female key of the top face of all concrete block courses receiving geogrid reinforcement. Gaps between adjacent lock bars in the key shall not exceed 3-inches. The lock bar shall be installed flat side up, with the angled side to the back of the concrete block, as shown in the shop drawings.

Geogrid reinforcement shall be placed and connected to concrete block courses specified to receive soil reinforcement. The leading edge of the geogrid reinforcement shall be maintained within 1-inch of the front face of the supporting concrete blocks below. Geogrid panels shall be abutted for 100 percent backfill coverage with less than a 4-inch gap between adjacent panels.

Backfill shall be placed and compacted level with the top of each course of concrete blocks, and geogrid reinforcement placed and connected to concrete block courses specified to receive soil reinforcement, before the Contractor may continue placing the next course of concrete blocks.

Mesa Wall

For all concrete block courses receiving geogrid reinforcement, the fingers of the block connectors shall engage the geogrid reinforcement apertures, both in the connector slot in the block, and across the block core. For all concrete block courses with intermittent geogrid coverage, a #3 steel reinforcing bar shall be placed, butt end to butt end, in the top block groove, with the butt ends being placed at a center of a concrete block.

(*****)

Add the following new section:

6-21 FRP BOARDWALKS NEW SECTION

6-21.1 Description

This section relates to the structural and incidental items for the design, fabrication, and construction of the FRP Boardwalks and the fabrication of the FRP plate soil retaining system at Boardwalk #1 and the design, detailing and fabrication of the FRP collars at the Kiosk on Boardwalk #3.

Applicable items related to the FRP Boardwalks found in other sections of this Specification include:

1. Concrete Caps, see Section 6-02
2. Steel Piling, see Section 6-05
3. Test Piles, see Section 6-05.3 (10)
4. Foundation Information, see Section 6-01.2
5. Mesh in-fill panels, see Section 9-07.7

The Contractor shall furnish, fabricate (where necessary), and install all fiberglass reinforced plastic (FRP) items, with all appurtenances, accessories, and incidentals necessary to produce a complete, operable and serviceable installation as shown on the Contract Drawings and as specified herein, and in accordance with the requirements of the Contract Documents.

Design Criteria

FRP Pedestrian Boardwalks shall be designed in accordance with IBC, latest edition, ASCE 7-16 minimum loads for buildings and other structures, ACI 318 latest edition, and the AASHTO Guide Specifications for Design of Pedestrian Bridges, Dated 2009.

Live Load = 90 psf uniform load.

Utility Loads = 10 plf

Snow Load = 25 psf uniform load.

Handrail top rail lateral load = 50 plf or a 200 lb concentrated load.

Wind and seismic loading shall be in accordance with ASCE-7.

Vertical Deflection

The vertical deflection of all framing members due to service pedestrian live load shall not exceed 1/360 of the span.

Horizontal Deflection

The horizontal deflection of the structure due to lateral wind loads shall not exceed 1/360 of the span length.

6-21.2 Molded Grating

1. Grating shall be of a one-piece molded construction with tops and bottoms of bearing bars and cross bars in the same plane. Grating shall have a square mesh pattern providing bidirectional strength. Grating shall be reinforced with continuous rovings of equal number of layers in each direction. The top layer of reinforcement shall be no more than 1/8 inch below the top surface of the grating to provide maximum stiffness and prevent resin chipping of unreinforced surfaces. Percentage of glass (by weight) shall not exceed thirty-five percent (35%) to achieve maximum corrosion resistance, and as required to maintain the structural requirements of the Contract.
2. After molding, no dry glass fibers shall be visible on any surface of bearing bars or cross bars. All bars shall be smooth and uniform with no evidence of fiber orientation irregularities, interlaminar voids, porosity, resin rich or resin starved areas.
3. Non-slip surfacing: Grating shall be manufactured with a grit top surface, or approved equal, applied to the top surface of each bar providing maximum slip resistance. Applied non-slip surfacing shall be adhered to bars utilizing IR (infrared) oven curing process to assure adequate cure of the resin, advanced UV resistance and durability.
4. Bar intersections of full depth bars are to be filleted to a minimum radius of 1/16 inch to eliminate local stress concentrations and the possibility of resin cracking at these locations. Intersections of secondary, partial depth bars do not require a fillet.
5. Fire rating: Grating shall be fire retardant with a tested flame spread rating of 25 or less when tested in accordance with ASTM E84. Certifications shall be dated within the past two (2) years and test data performed only on the resin shall not be acceptable.
6. Resin system: The resin system used in the manufacture of the grating shall be Corvex. Manufacturer may be required to submit corrosion data from tests performed on actual grating products in standard chemical environments. Corrosion resistance data of the base resin from the manufacturer is not a true indicator of grating product corrosion resistance and shall not be accepted.
7. Color: Light gray with a fine grid finish.
8. Depth: 1-1/2-inches with a tolerance of plus or minus 1/16 inch.
9. Mesh Configuration: 1-1/2-inches square mesh bottom, 3/4-inch square mesh top, with a tolerance of plus or minus 1/16-inc mesh centerline to centerline. Top surface meets ADA requirements.

10. Weight shall be 4.5 lbs/s.f. minimum.
11. Load/Deflection: Grating design loads shall be less than manufacturers published maximum recommended loads. Maximum recommended loads shall be determined by acoustic emission testing. Deflection is not to exceed 0.375 inch or $L/D = 120$, whichever is less. Grating shall meet manufacturer's published safe recommended loadings with deflection not to exceed the following:
 - a. Maximum deflection of 0.28 inches with a uniform distributed load of ninety (90) pounds per square foot at 48-inch clear span.
12. Substitutions: Other products of equal strength, stiffness, corrosion resistance and overall quality may be submitted with the proper supporting data to the Engineer for approval ten(10)days before bid date.

6-21.2(1) General Requirements

1. All fiberglass reinforced plastic (FRP) items furnished under this Section shall be composed of fiberglass reinforcement and resin in qualities, quantities, properties, arrangements, and dimensions as necessary to meet the design requirements and dimensions as specified in the Contract Documents.
2. All grating products shall have a tested flame spread rating of twenty-five (25) or less per ASTM E84 Tunnel Test. Gratings shall also have tested burn time of less than thirty (30) seconds and an extent of burn rate of less than or equal to ten (10) millimeters per ASTM D635.
3. All mechanical grating clips shall be manufactured of Type 316 SS (stainless steel).
4. Fasteners shall be tamper-proof, of one type and be manufactured of Type 316 SS (stainless steel)

6-21.2(2) Applicable Codes

The publications listed below (latest revision applicable) form a part of this specification to the extent referenced herein. The publications are referred to within the text by the designation only.

1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) Test Methods:
 - a. ASTM D635 – Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position.
 - b. ASTM E84 – Surface burning Characteristics of Building Materials.

6-21.2(3) Shop Plans

1. Submit shop drawings of all fabricated gratings and accessories.
2. Submit manufacturer's shop drawings clearly showing material sizes, types, styles, part or catalog numbers, complete details for the fabrication and erection of

components including, but not limited to, location, lengths, type and sizes of fasteners, clip angles, member sizes, and connection details.

3. Submit manufacturer's published literature including structural design data, structural properties data, grating load/deflection tables, corrosion resistance tables, certificates of compliance, test reports as applicable, concrete anchor systems and their allowable load tables, and design calculations.
4. All drawings and calculations shall be signed and sealed by a Professional Engineer who is licensed in the State of Washington
5. Submit sample pieces of each item specified herein for acceptance by the ENGINEER as to quality and color. Sample pieces shall be manufactured by the method to be used in the WORK.
 - a. Color Sample, as described in 6-21.2.
 - b. Mesh sample.
6. Submit a written three (3) year warranty.
7. Submit manufacturer's certifications as listed in 6-21.2 (6).

6-21.2(4) Fabrication

1. Measurements: Grating supplied shall meet the dimensional requirements and tolerances as shown or specified. The Contractor shall provide and/or verify measurements in field for work fabricated to fit field conditions as required by grating manufacturer to complete the work. When field dimensions are not required, contractor shall determine correct size and locations of required holes or cutouts from field dimensions before grating fabrication.
2. Layout: Each grating section shall be readily removable, except where indicated on drawings. Manufacture to provide openings and holes where located on the contract drawings. Grating openings which fit around protrusions (pipes, cables, machinery, etc.) shall be discontinuous at approximately the centerline of opening so each section of grating is readily removable.
3. Sealing: All shop fabricated grating cuts shall be sealed to provide maximum corrosion resistance. All field fabricated grating cuts shall be coated similarly by the contractor in accordance with the manufacturer's instructions.
4. Hardware: For panels installed on structural members, Type 316 SS stainless steel hold-down clips shall be provided, with a minimum of four (4) per piece of grating, or as recommended by the manufacturer.

6-21.2(5) Handling and Storage

1. Delivery of Materials: Manufactured materials shall be delivered in original, unbroken pallets, packages, containers, or bundles bearing the label of the manufacturer.

Adhesives, resins and their catalysts and hardeners shall be crated or boxed separately and noted as such to facilitate their movement to a dry indoor storage facility.

2. Storage of Products: All materials shall be carefully handled to prevent them from abrasion, cracking, chipping, twisting, other deformations, and other types of damage. Adhesives, resins, their catalysts and, hardeners are to be stored in dry indoor storage facilities between 70 and 85 degrees Fahrenheit (21 to 29 degrees Celsius) until they are required.

6-21.2(6) Acceptable Manufacturers and Qualifications

A list of approved manufacturers includes (but not limited to):

Fibergrate Composite Structures Inc.
5151 Beltline Road, Suite 1212
Dallas, Texas 75254-7028
800-527-4043
Website: www.fibergrate.com

Strongwell
400 Commonwealth Ave.
Bristol, Virginia 24201
276-645-8000
Website: strongwell.com

Creative Composite Group
750 Rosedale Dr.
Dayton, OH 45402
937-723-9031
Website: creativecompositesgroup.com

Qualifications

1. All items to be provided under this Section shall be furnished only by manufacturers having a minimum of ten (10) years of experience in the design and manufacture of similar products and systems. Additionally, if requested, a record of at least five (5) previous, separate, similar successful installations in the last five (5) years shall be provided.
2. All FRP grating must be manufactured and fabricated within North America. All FRP grating and fabrications shall be obtained from a single manufacturer for material and construction consistency.
3. Manufacturer shall offer a three (3) year limited warranty on all fiber-reinforced plastic (FRP) products against defects in materials and workmanship.

4. Manufacturer shall be certified to the ISO 9001-2015 Standard.
5. Manufacturer shall provide proof of certification from at least two other quality assurance programs for its facilities or products (UL, DNV, ABS, USCG, AARR).

6-21.2(7) Shop Inspection

Shop inspection is authorized as required by the Owner and shall be at Owner's expense. The fabricator shall give ample notice to Contractor prior to the beginning of any fabrication work so that inspection may be provided. The grating shall be as free, as commercially possible, from visual defects such as foreign inclusions, delamination, blisters, resin burns, air bubbles and pits. The surface shall have a smooth finish (except for grit top surfaces).

6-21.2(8) Installation

Contractor shall install gratings in accordance with manufacturer's assembly drawings. Panels are to be supported with grating legs in each corner or other equivalent support mechanism. Lock grating panels securely in place with hold-down fasteners or as specified herein. Field cut and drill fiberglass reinforced plastic products with carbide or diamond tipped bits and blades. Seal cut or drilled surfaces in accordance with manufacturer's instructions. Follow manufacturer's instructions when cutting or drilling fiberglass products or using resin products; provide adequate ventilation.

6-21.3 Pultruded Fiberglass Shapes

Work in this section includes the pultruded fiberglass structural boardwalk framing, the railing components and the FRP plates for soil retention at Boardwalk #1 in accordance with the Contract Documents.

6-21.3(1) General

1. All structural shapes are to be manufactured by the pultrusion process with a glass content minimum of 45 percent, maximum of 55 percent by weight. The structural shapes shall be composed of fiberglass reinforcement and resin in qualities, quantities, properties, arrangements, and dimensions as necessary to meet the design requirements and dimensions as specified in the Contract Documents.
2. Fiberglass reinforcement shall be a combination of continuous roving, continuous strand mat, and surfacing veil in sufficient quantities as needed by the application and/or physical properties required.
3. Resins shall be fire retardant isophthalic polyester; with chemical formulation necessary to provide the corrosion resistance, strength, and other physical properties as required.
4. All finished surfaces of FRP items and fabrications shall be smooth, resin-rich, free of voids, and without dry spots, cracks, crazes, or unreinforced areas. All glass fibers shall be well covered with resin to protect against their exposure due to wear or weathering.

5. All pultruded structural shapes shall be further protected from ultraviolet (UV) attack with: 1) integral UV inhibitors in the resin and, 2) a synthetic surfacing veil to produce a resin rich surface. 3) all guardrail components to receive an additional 1 mil, at a minimum, Carbothane 133 HB Manufactured by Carboline for graffiti resistance.
6. All fire retardant FRP products shall have a tested flame spread rating of twenty-five (25) or less per ASTM E84 – Tunnel Test.
7. Color: Dark Gray

6-21.3(2) Applicable Codes

1. The publications listed below (latest revision applicable) form a part of this specification to the extent referenced herein. The publications are referred to within the text by the designation only.
2. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) Test Methods:
 - a. ASTM D638 – Tensile Properties of Plastics.
 - b. ASTM D790 – Flexural Properties of Unreinforced and Reinforced Plastics.
 - c. ASTM D2344/D2344M – Short-Beam Strength of Polymer Matrix Composite Materials and Their Laminates.
 - d. ASTM D696 – Coefficient of Linear Thermal Expansion for Plastics.
 - e. ASTM E84 – Surface Burning Characteristics of Building Materials.

6-21.3(3) Shop Plans

1. Submit shop drawings of all fabricated structural systems and accessories in accordance with the provisions of this Section.
2. Submit manufacturer's shop drawings clearly showing material sizes, types, styles, part or catalog numbers, complete details for the fabrication of and erection of components including, but not limited to, location, lengths, type and sizes of fasteners, clip angles, member sizes, and connection details.
3. Submit the manufacturer's published literature including structural design data, structural properties data, corrosion resistance tables, certificates of compliance, test reports as applicable, and design calculations.
4. All drawings and calculations shall be signed and sealed by a Professional Engineer who is licensed in the State of Washington
5. Submit sample pieces of each item specified herein for acceptance by the Engineer as to quality and color as described in 6-21.3(1). Sample pieces shall be manufactured by the method to be used in the Work.

- 6 Submit a written three (3) year warranty.
7. Submit certifications as described below under Qualifications 6-21.3 (5).

6-21.3(4) Material Properties

Pultruded structural shapes are to have the minimum longitudinal mechanical properties listed below:

Property	ASTM Method	Value	Units
Tensile Strength	D638	30,000 (206)	psi (MPa)
Tensile Modulus	D638	2.5 x 10 ⁶ (17.2)	psi (GPa)
Flexural Strength	D790	30,000 (206)	psi (MPa)
Flexural Modulus	D790	1.8 x 10 ⁶ (12.4)	psi (GPa)
Flexural Modulus (Full Section)	N/A	2.8 x 10 ⁶ (19.3)	psi (GPa)
Short Beam Shear (Transverse)	D2344/D2344M	4,500 (31)	psi (MPa)
Shear Modulus (Transverse)	N/A	4.5 x 10 ⁵ (3.1)	psi (GPa)
Coefficient of Thermal Expansion	D696	4.4 x 10 ⁻⁶ (8.0 x 10 ⁻⁶)	in/in/°F (cm/cm/°C)
Flame Spread	E84	25 or less	N/A

6-21.3(5) Acceptable Manufacturers and Qualifications

A list of approved manufacturers includes (but not limited to):

Fibergrate Composite Structures Inc.
 5151 Beltline Road, Suite 1212
 Dallas, Texas 75254-7028
 800-527-4043
 Website: www.fibergrate.com

Strongwell
 400 Commonwealth Ave.
 Bristol, Virginia 24201
 276-645-8000
 Website: strongwell.com

Creative Composite Group
 750 Rosedale Dr.
 Dayton, OH 45402
 937-723-9031
 Website: creativecompositesgroup.com

Qualifications

1. All items to be provided under this Section shall be furnished only by manufacturers having a minimum of ten (10) years' experience in the design and manufacture of similar products and systems. Additionally, if requested, a record of at least five (5) previous, separate, similar successful installations within the last five (5) years shall be provided.
2. All FRP Pultruded Structural Shapes must be manufactured and fabricated within North America. All FRP Pultruded Structural Shapes and fabrications shall be obtained from a single manufacturer for material and construction consistency.
3. Manufacturer shall offer a three (3) year limited warranty on all FRP products against defects in materials and workmanship.
4. Manufacturer shall be certified to the ISO 9001-2015 standard.
5. Manufacturer shall provide proof of certification from at least two (2) other quality assurance programs for its facilities or products (DNV, ABS, USCG, AARR).
6. Manufacturer shall provide proof, via independent testing, that materials proposed as a solution do not contain heavy metals in amounts greater than that allowed by current EPA requirements.

6-21.3(6) Fabrication

1. Measurements: Structural Shapes supplied shall meet the minimum dimensional requirements as shown or specified. The Contractor shall provide and/or verify measurements in field for work fabricated to fit field conditions as required by manufacturer to complete the work. Determine correct size and locations of required holes or coping from field dimensions before structural shape fabrication.
2. Sealing: All shop fabricated cuts or drilling shall be coated with vinyl ester resin to provide maximum corrosion resistance. All field fabricated cuts or drilling shall be coated similarly by the contractor in accordance with the manufacturer's instructions.
3. Hardware: Type 316 SS stainless steel bolts shall be provided.

6-21.3(7) Handling and Storage

1. Delivery of Materials: Manufactured materials shall be delivered in original, unbroken pallets, packages, containers, or bundles bearing the label of the manufacturer. Adhesives, resins and their catalysts and hardeners shall be crated or boxed separately and noted as such to facilitate their movement to a dry indoor storage facility.
2. Storage of Products: All materials shall be carefully handled to prevent them from abrasion, cracking, chipping, twisting, other deformations, and other types of damage. Adhesives, resins, their catalysts and hardeners are to be stored in dry indoor storage

facilities between 70 and 85 degrees Fahrenheit (21 to 29 degrees Celsius) until they are required.

6-21.3(8) Shop Inspection

Shop inspection is authorized as required by the Owner and shall be at Owner's expense. The fabricator shall give ample notice to Contractor prior to the beginning of any fabrication work so that inspection may be provided. The structural shapes shall be as free, as commercially possible, from visual defects such as foreign inclusions, delamination, blisters, resin burns, air bubbles, and pits.

6-21.4 Measurement

The "FRP Boardwalks (Boardwalks #2 and #3)" will be measured by the square foot.

No separate measurement will be made for the following items for the "FRP Boardwalks (Boardwalks #2 and #3)":

- Structure excavation class A including haul,
- Compacted gravel backfill for walls,
- Compacted aggregate for gravel base,
- Furnishing and driving steel piles,
- Furnishing, driving, and testing one test pile on each boardwalk,
- Form and pour the cast-in-place caps and abutments including all reinforcement and all incidental items,
- Procuring, transporting, and erecting the Structural Boardwalk Framing,
- Procure and install the FRP Molded Gratings,
- Procure and install FRP rail system,
- Procure and install the galvanized welded wire reinforcement in-fill panels.
- Stamped shop drawings and calculations.
- Design, detail, and fabricate the FRP collars on Boardwalk #3.
- Costs associated with construction means and method for providing equipment access across and adjacent to the wetlands in accordance to permit conditions.

Measurement for procuring, fabricating, and installing the illumination system along FRP Boardwalk (Boardwalk #2 and #3) shall be per Section 8-20.4.

6-21.5 Payment

Payment will be made for the following Bid item when it is included in the Proposal:

"FRP Boardwalk (Boardwalk #2)", per square foot.

"FRP Boardwalk (Boardwalk #3)", per square foot.

The unit Contract price per square foot shall be full pay for all costs for design, fabrication, delivery, and installation of the boardwalks and foundations and other necessary incidentals including the means and method to provide the equipment access necessary to complete the boardwalks as specified in Section 6-21.4 above.

All costs in connection with procuring, fabricating, and installing the illumination system shall be included in the lump sum contract price for the "Illumination System, Complete". Payment for this item is included in Section 8-20.5.

All costs in connection with procuring and installing the FRP soil retention system shall be included in unit contract price for the "Hollow Core Concrete Boardwalk (Boardwalk #1)". Payment for this item is included in Section 6-02.5.

END OF DIVISION 6

DIVISION 7

DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

7-04 STORM SEWERS

7-04.2 Materials (*****)

Section 7-04.2 is supplemented with the following:

Ductile Iron Storm Sewer Pipes

Ductile iron pipe shall conform to Section 9-30.1(1) and shall be Class 52 minimum.

7-04.5 Payment (*****)

Section 7-04.5 is supplemented with the following:

“Ductile Iron Storm Sewer Pipe ___ In. Diam.”, per linear foot.

All costs for importing trench backfill material and hauling trench excavation material shall be included in the linear foot unit price for storm sewers.

7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.1 Description (*****)

Section 7-05.1 is supplemented with the following:

This work shall consist of furnishing and installation of catch basins and associated vaned grates, herringbone grates, locking solid metal cover and frame, or combination inlets in accordance with the Plans and these Specifications. This work shall also consist of slip resistant lid for manholes and catch basins.

7-05.2 Materials (*****)

Section 7-05.2 is supplemented with the following:

Slip Resistant Lid

Where new solid storm drain lids are located within the shared-use trail, shoulders, sidewalks or other pedestrian access area, the entire surface of the lid and the frame (if greater than 1/2-inch exposed surface) must be treated with a shop-applied, slip-resistant coating. Existing lids can be treated, if approved by the Engineer, with a field-applied, slip resistant coating provided that all other features on the lid are ADA compliant.

Slip-resistant surfacing material shall be identified with a permanent marking on the underside of each lid where it is applied. The permanent marking shall be formed with a mild steel weld bead, with a line thickness of at least 1/8 inch. The marking shall include a two character identification code for the type of material used and the year of manufacture or application. The following materials are approved for application as slip-resistant material, and shall use the associated identification codes:

1. Harsco Industrial IKG, Mebac #1-Steel: M1
2. W.S. Molnar Co., SlipNOT Grade 3 – Coarse: S3
3. Thermion, SafTrax TH604 Grade #1 – Coarse: T1

7-05.4 MEASUREMENT
(*****)

Section 7-05.5 is supplemented with the following:

Slip Resistant Lid, Catch Basin Type 1 w/ Combination Inlet, Catch Basin Type 1L w/ Combination Inlet and Catch Basin Type 2 48 In. Diam. w/ Combination Inlet shall be measured per each furnished and installed.

7-05.5 PAYMENT
(*****)

Section 7-05.5 is supplemented with the following:

The unit contract price per each for “Catch Basin Type 1”, “Catch Basin Type 1L”, “Catch Basin Type 2 48 In. Diam.”, “Catch Basin Type 1 w/ Combination Inlet”, “Catch Basin Type 1L w/ Combination Inlet” and “Catch Basin Type 2 48 In. Diam. w/ Combination Inlet” shall be full pay for all labor, equipment, and materials necessary, including but not limited to excavation; furnishing and installing gravel backfill for pipe zone bedding and backfill and for foundation materials; furnishing and installing hardware, frames, grates, and solid covers with locking mechanisms; connection to existing and new pipes; and disposal of excess soils and materials.

All costs to adjust new utility structures to finished grade shall be incidental to the bid item for constructing the structure.

“Slip Resistant Lid”, per each.

The unit contract price per each for “Slip Resistant Lid” shall be full pay for all labor, equipment and materials necessary to install a new slip-resistant cover on the existing structure, including all locking mechanisms.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.3(3) Backfilling

(*****)

The fourth paragraph of this section is modified as follows:

Trench backfill shall be as shown in City of Lynnwood standard detail STD6-12.

7-09 WATER MAINS

7-09.3 Construction

(*****)

Supplement this section with the following:

Water main trench backfill material shall be crushed surfacing base course unless otherwise directed by the Engineer.

7-09.5 Payment

(*****)

Supplement this section with the following:

The unit price for “____ Pipe for Water Main ____ In. Diam.” shall also include fittings, all trench backfill material and backfilling, compaction, and haul of unused materials.

7-14 HYDRANTS

7-14.3 Construction Requirements

(*****)

Supplement this section with the following:

Hydrants shall be installed per City of Lynnwood STD5-7.

Contractor shall be required to determine the length of the pipe spools between the fittings that are necessary to maintain clearances. Note that Contractor may be required to adjust the hydrant location from those called out on the Plans to maintain the required clearance. These fittings shall be included in the hydrant unit price and shall not be measured for payment.

Contractor shall expose the existing water main and/or fitting to verify material type and size at the point of connection and provide an appropriate fitting for connection as shown on the Plans.

All materials shall be onsite and approved by the Engineer prior to scheduling water shutdowns.

7-14.4 Measurement
(*****)

Supplement this section with the following:

“Hydrant Assembly”, shall be measured per each installed, complete and in-place.

Excavation, import pipe bedding, and trench backfill will not be measured for separate payment for any hydrant relocation or installation.

7-14.5 Payment
(*****)

Supplement this section with the following:

“Hydrant Assembly”, per each.

The unit price in the Proposal shall be full compensation for all labor, tools, equipment, and materials necessary or incidental to installing a tapping sleeve and valve assembly on the existing main and installing a new hydrant assembly per City standards including but not limited to including hydrant spool, pipe bedding and backfill, trench backfill and backfilling and valve box with adjustments, cleaning and testing.

7-15 SERVICE CONNECTIONS

7-15.1 Description
(*****)

Section 7-15.1 is supplemented with the following:

The work in this section involves adjusting and relocating water meter and water valves as shown in the Plans.

7-15.2 Materials
(*****)

Section 7-15.2 is supplemented with the following:

Material for water service works shall be in accordance with the requirements of the City of Lynnwood.

7-15.3 Construction Requirements
(*****)

Section 7-15.3 is supplemented with the following:

Notifications to the City of Lynnwood and any affected residence or business shall be made a minimum of 48 hours in advance of any disruption. Water service interruptions shall not exceed 6 hours.

Where the new water main is closer to the existing meter, as shown in the Plans, reconnect existing service pipes to new water main and new service saddles by carefully pulling back and trimming the service pipe to exactly fit the new location without any splices.

Where the new water main is further away from the existing meter than the old, as shown in the Plans, entirely new service connection pipes shall be installed from the existing meter to the new saddle on the new main.

7-15.4 Measurement

(*****)

Section 7-15.4 is supplemented with the following:

“Adjust Water Meter”, per each.

“Adjust Water Valve”, per each.

“Adjust Area Drain”, per each

No separate measurement will be made for trench excavation, pipe bedding, trench backfill and compaction.

Service Connections will be measured per each regardless of the type of reconnection made as described above.

7-15.5 Payment

(*****)

Section 7-15.5 is supplemented with the following:

“Adjust Water Meter”, per each.

The unit cost per each for “Adjust Water Meter” shall be full pay for all work to furnish and install a slip-resistant meter box and adjust to finished grade including, but not limited to, disposing existing meter box and maintaining water service to the adjoining property.

“Adjust Water Valve”, per each.

The unit cost per each for “Adjust Water Vault” shall be full pay for all costs to furnish all materials, equipment, and labor necessary to adjust the vault, including but not limited to, sawcutting, excavating, backfilling, compacting and surface restoration.

“Adjust Area Drain”, per each.

The unit cost per each for “Adjust Area Drain” shall be full pay for all costs to furnish all materials, equipment, and labor necessary to adjust the area drain, including but not limited to, sawcutting, excavating, backfilling, compacting and surface restoration.

Payment for the unit price for “Service Connection ___ In. Diam”, per each shall include all trenching, hauling and importing backfill materials, and surface restoration.

END OF DIVISION 7

DIVISION 8

MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.1 Description (*****)

Section 8-01.1 is supplemented with the following:

This work consists of seeding fertilizing and mulching for areas disturbed by construction which are not restored by planting for temporary disturbance in wetland areas in the areas shown on the Plans.

8-01.3 Construction Requirements

8-01.3(1) General

8-01.3(1)A Submittals (February 14, 2020, Lynnwood GSP)

The first paragraph of Section 8-01.3(1)A is supplemented with the following:

If the TESC Plan in the contract documents is adopted by the Contractor, the Contracting Agency shall be so notified prior to the Preconstruction Conference. If the Contractor modifies the TESC Plan in the contract documents, the revised TESC Plan shall be submitted for approval prior to the Preconstruction Conference.

Section 8-01.3(1)A is supplemented with the following:

Prior to the Preconstruction Conference the Contractor shall prepare and submit to the Contracting Agency the following documents for approval:

1. Spill Prevention, Control & Countermeasures (SPCC) Plan – Per Section 1-07.15(1);
2. Storm Water Pollution Prevention Plan (SWPPP) – Per Section 8-01.3(1)A.

The Contractor shall use the City of Lynnwood SPCC And SWPPP templates found on the City's website at <http://www.lynnwoodwa.gov/City-Services/Environmental--Surface-Water-and-Storm-Water/Environmental-Documents-and-Reports.htm> to develop the SPCC Plan and the SWPPP in lieu of the WSDOT templates specified in the Standard Specifications.

The Contractor will not be authorized to mobilize or begin on-site work until both the SWPPP and SPCC plan have been approved by the Contracting Agency.

8-01.3(2) Temporary Seeding and Mulching

8-01.3(2)D Temporary Mulching
(January 5, 2015 WSDOT GSP)

Section 8-01.3(2)D is supplemented with the following:

***Wood fiber mulch *** shall be applied at a rate of *** 2,000 *** pounds per acre with no more than *** 1,500 *** pounds per acre applied in a single lift. .

(*****)

Fertilizer shall not be used in wetland areas.

8-02 ROADSIDE RESTORATION

8-02.1 Description
(*****)

Section 8-02.1 shall be supplemented with the following:

This work shall include constructing and installing various habitat structures such as habitat log and brush pile as detailed and shown in the Plans and removing and disposing of buried man-made debris that may be encountered during soil amendment incorporation.

8-02.2 Materials
(*****)

Section 8-02.2 shall be supplemented with the following:

See the following sections for these materials:

9-14.2(1) Topsoil Type A

9-14.3 Seed

9-14.4 Fertilizer

9-14.9 Time-Release Watering Tube And Insert

9-14.10 Habitat Structures

8-02.3 Construction Requirements

8-02.3(2) Work Plans

8-02.3(2)C Plant Establishment Plan
(*****)

Section 8-02.3(2)C is revised to read as follows:

The Plant Establishment Plan shall describe activities necessary to ensure continued health and vigor of planted and seeded areas in accordance with the requirements of Sections 8-02.3(12) and 8-02.3(13). Should the plan become unworkable at any time during the first-year establishment, the Contractor shall submit a revised plan prior to proceeding with further Work. The Plant Establishment Plan shall include:

1. Proposed scheduling of joint inspection meetings, activities, materials, equipment to be utilized for the first-year plant establishment.
2. Proposed adaptive management activities to ensure successful establishment of seeded, sodded and planted areas, including but not limited to:
 - a. Fertilizing
 - b. Watering including:
 - i. Source of water
 - ii. Method of delivering water
 - iii. Schedule of watering
 - iv. Management of system and/or repair
 - c. Litter and Debris Removal
 - d. Insect and Disease Control
 - e. Plant Replacement
3. Supervisor/Responsible Contact Name
 - a. Local address
 - b. Local telephone number
4. Signature of the preparer and date the Plant Establishment Plan was prepared.

Failure to comply with the plant establishment plan or to revise the plan as needed or to comply with corrective steps outlined by the Engineer will increase the duration of first-year plant establishment and will result in a suspension of time for first-year plant establishment period.

Any such suspension of time will not be lifted until all unsatisfactory conditions have been corrected to the satisfaction of the Engineer.

Watering shall be sufficient to supplement natural rainfall to maintain healthy and vigorous plant material at the following frequencies:

1. One (1) inch of water per month and applied a minimum of once per week during April, May and September.
2. Four (4) inches of water per month and applied a minimum of once per week during June, July and August.

Contractor is required to have approval of the Engineer to water less than these amounts or to apply water less often than these minimums due to weather.

8-02.3(3) Weed and Pest Control

8-02.3(3)B Planting and Lawn Area Weed Control
(*****)

Section 8-02.3(3)B is supplemented with the following:

When full wood chip or bark mulch coverage is indicated in the Plans, all vegetation that seeds into the planting area shall be controlled. Native vegetation that seeds into the site may be left uncontrolled only when specifically allowed by the Engineer.

8-02.3(4) Topsoil

8-02.3(4)A Topsoil Type A
(*****)

This section is deleted in its entirety and replaced with the following:

Topsoil Type-A shall be used where shown in Plans and as a uniform planting medium for grass cover on top of the infiltration trenches. It shall be placed to compacted depth of six inches. It shall be lightly compacted by a single pass of a 200 lb. sod roller or similar approved method. A shallow (1-inch depression) shall be created along the trench center line to facilitate surface drainage to the trenches.

Topsoil shall not be placed when the ground or topsoil is frozen, excessively wet, or in the opinion of the Engineer, in a condition detrimental to the Work.

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation

Section 8-02.3(5) is supplemented with the following:

(August 4, 2014 WSDOT GSP, Option 4)

Removal of Buried Man-Made Debris

The Contractor shall remove buried man-made debris as directed by the Engineer to a maximum depth of two feet. The excavated debris shall be removed from the project site to a disposal facility approved by the Engineer.

8-02.3(6) Mulch and Amendments

Section 8-02.3(6) is supplemented with the following:

(NWR September 12, 2019, Option 1)

The Contractor shall notify the Engineer a minimum of seven calendar days prior to the start of soil amendment Work. Soil amendment application and incorporation methods shall be approved by the Engineer prior to installation.

Order of Work:

1. Initial planting area weed control
2. Grading and/or excavation
3. Soil placement
4. Soil amendment placement and incorporation

Soil amendment shall not be placed when a condition exists that may be detrimental to successful application, incorporation, or soil structure, such as frozen or water saturated soil.

8-02.3(6)A Compost

*(*****)*

Section 8-02.3(6)A shall be supplemented with the following:

Compost shall not be placed when the ground or topsoil is frozen, excessively wet, or in the opinion of the Engineer, in a condition detrimental to the Work.

8-02.3(6)B Fertilizers

*(*****)*

The following is added at the end of this section:

Slow release fertilizer tablets meeting the requirements of Section 9-14.3, shall be included at time of planting in all tree and shrub plantings as detailed. Tablets shall be installed at the manufacturer's recommended rate for trees and shrubs. All costs for the supply and

installation of fertilizer tablets shall be included in the unit bid price for all tree and shrub plantings, and no additional compensation will be made.

8-02.3(8) Planting

8-02.3(8)A Dates and Conditions for Planting

Section 8-02.3(8)A is supplemented with the following:

(NWR September 12, 2019, Option 3)

Extension of Planting Period

For planting areas where soil is saturated during the Contract planting period, the Contractor may request an extension of the planting period until a time when soils are no longer saturated. The Contractor must submit a written request to the Engineer a minimum of 10 working days prior to the end of the Contract planting period. The request must indicate the following:

1. Planting areas included in proposal
2. Method of storage for plant material and cuttings
3. Time for planting
4. Supplementary measures to ensure plant survival

The Engineer will only approve the extension for planting areas where saturated soil prevents planting during the Contract planting period. Only additional costs for storage of plant material and remobilization are included in this item.

An extension of planting period waives only the planting timing for the selected planting areas. All other Provisions shall continue to apply.

8-02.3(11) Mulch

8-02.3(11)B Bark or Woodchip Mulch

*(*****)*

Section 8-02.3(11)B is supplemented with the following:

Wood Chip Mulch

Wood chip mulch shall be placed to a uniform non-compacted depth of 3 inches over planting areas indicated in the Plans. Wood chip mulch shall not be applied by blower truck. Prior to placement, the application method shall be approved by the Engineer. The Contractor shall notify the Engineer 5 working days prior to the start of application. Wood chip mulch shall not be placed in areas of standing water.

8-02.3(13) Plant Establishment
(*****)

This section is deleted in its entirety and replaced with the following:

It shall be the Contractor's responsibility to maintain all the landscaped area of this Contract from the time of installation until the project is completed and accepted by the Engineer as complete. The plant establishment period shall begin when the planting and construction has been completed and accepted by the Engineer and shall extend for 365 calendar days.

All plant material shall be watered, pruned, fertilized, sprayed, and otherwise maintained and protected throughout the plant establishment period. Rejected plant materials shall be replaced. Plant material for replacement shall be inspected and approved as equal plant material prior to replacement being made. Acquisition of replacements shall be the responsibility of the Contractor with replacements to be made normally during the planting season.

All plant material shall be watered by thorough sprinkling every 2 weeks during the dry season (April 15th through October 1st) or more often as needed to keep the ground moist, the plants healthy, and to prevent wilting.

Pruning shall be performed as directed by the Engineer so as to maintain a neat, healthy appearance, in accordance with good practice for the type of tree or plant. All cuts 0.75-inch in diameter or greater shall be painted with a tree sealer by the Contractor.

The Contractor shall provide the following fertilizer application during the plant establishment period as directed by the Engineer. The Inspector must be present during this operation.

Fertilizer: One (1) part Blue Chip Nitriform (Granular) slow release 38-0-0

Two (2) parts Agro Nursery Supplement #3, 7-8-9

Rate of application shall be three cups per tree and 0.25-cup per groundcover plant.

Trees and groundcover shall be sprayed with the proper insecticides, fungicides, and chemical mixtures as necessary to control infestation by harmful insects, pests and plant diseases.

All bark covered areas shall be kept weed free. Frequency of weeding shall be sufficient to keep weeds from going to seed and shall be done at least once each month. Chemical herbicides shall not be used for a period of 60 calendar days after the installation of plant material. When using chemical herbicides, manufacturer's recommended application rates shall be followed. Any plant material damaged by use of herbicides shall be replaced at the Contractor's expense.

All tree stakes, wrappings, guards, and fastenings shall be kept intact and effective in maintaining firm support. Where fastenings have become too tight or too short, new, and larger fastenings shall be furnished and installed by the Contractor to prevent strangulation or irregular growth of the tree. Stakes shall be removed during the last month of plant establishment. All deciduous tree stakes shall be kept plumb. All deciduous trees shall be

sprayed once during the year with an effective preemergent, fungus-inhibiting dormant spray. The Inspector must be present during this operation.

Cleanup shall be made immediately after and as part of the work done in the area. The cleanup shall include the entire area under this contract. The contract area shall be cleaned of litter and debris at least once each month. Such cleanup shall include the pickup and removal from the contract area of all clippings, trimmings, leaves, litter, and debris originating from any source whatsoever. Planting areas shall be neatly dressed and finished; walks and paved area shall be hosed off with water as necessary and otherwise kept clean and free from dirt, bark, and litter.

Plantings and lawn areas shall be properly protected against harm from wind, unusual weather, and the public. Special planting techniques, defoliating, wilt proofing, or spray misting may be required for unseasonal planting, prolonged periods of drought, etc. No work shall be performed in, over, or adjacent to planting areas without proper protection and safeguards.

At the end of each month during the plant establishment period, the Contractor shall submit to the Engineer a Plant Establishment Monthly Statement of Maintenance form itemizing the maintenance work performed during the month for which payment is requested. The list shall include a detailed account of the type of maintenance work performed, on what date, the materials used, and shall call to the attention of the Engineer any existing condition that may require special consideration or treatment. Failure to follow this procedure at the end of any month during the plant establishment period shall result in forfeiture of the monthly payment for the month involved.

Inspections of the project site will be performed by the Engineer. The Engineer will notify the Contractor in writing of any deficiencies in the maintenance work. The Contractor shall perform whatever additional maintenance work is necessary as directed by the Engineer. Failure by the Contractor to perform any additional work within the time limits specified may result in forfeiture of the monthly payment or a portion thereof.

(*****)

Add the following new section:

8-02.3(17) Habitat Structures

New Section

Stake location for approval of the Engineer before proceeding with installation. The Contractor shall exercise care when installing habitat structures to ensure that the method of installation minimizes disturbance of waterways and prevents sediment or pollutant discharge into water.

Habitat Log

Place the log with branches in a stable position on the ground surface where it will stay in place. Notify Engineer if stable placement appears to be not possible in location shown in plans.

Habitat Brush Pile

Randomly pile woody material to provide variable coverage (dense to loose) in the area of the brush pile location. The brush pile shall be constructed without incorporation of rock, soil, foreign debris, or non-native material in the pile.

8-02.4 Measurement (*****)

The first sentence is deleted and replaced with the following:

Topsoil and Bark or Woodchip Mulch will be measured by the cubic yard of material in the hauling vehicle. Weed control pre-treatment of topsoil areas, excavation, and stockpiling are included in the bid item "Topsoil Type ___".

Section 8-02.4 is supplemented with the following:

Habitat Log will be measured per each.

Habitat Brush Pile will be measured per each.

8-02.5 Payment (*****)

Section 8-02.5 the item "Topsoil ___" per acre, and the paragraph following it is deleted and replaced with the following:

"Topsoil Type A", per cubic yard.

The unit Contract price per cubic yard for "Topsoil Type A" shall be full pay for all labor, materials, tools, and equipment necessary to furnish, load, haul, place, and compact the material as specified.

The item "Bark or Wood Chip Mulch", per acre or per square yard, is deleted and replaced with the following:

"Bark or Wood Chip Mulch", per square yard.

(*****)

Section 8-02.5 shall be supplemented with the following:

"Habitat Log", per each.

"Habitat Brush Pile", per each.

The unit contract price per each for "Habitat Log" and "Habitat Brush Pile" shall be full pay for all costs in furnishing the materials, loading, transporting, handling, and placing the habitat structures.

(*****)

Within Section 8-02.5, the paragraph immediately after the Bid item “PSIPE___”, per each, is revised to read as follows:

The unit Contract price for “PSIPE___”, per each, shall be full pay for all Work to perform as specified within the planting area for weed control and planting area preparation, planting, cleanup, water necessary to complete planting operations, and water and watering required for plant establishment as specified to the end of the first-year plant establishment.

8-04 CURBS, GUTTERS, AND SPILLWAYS

8-04.1 Description

(*****)

Section 8-04.1 is supplemented with the following:

This work shall consist of constructing cement concrete traffic curb and gutter, cement concrete traffic curb and low profile barrier curb where shown on the Plans.

8-04.2 Materials

(*****)

Section 8-04.2 is supplemented with the following:

Low Profile Barrier Curb

Materials shall meet the requirements as shown in the Plans and of Section 8-04.2.

8-04.3 Construction Requirements

(*****)

Section 8-04.3 is supplemented with the following:

Pedestrian curb may be constructed monolithically with curb ramps where pedestrian curb is shown on the Standard Plans.

8-04.4 Measurement

(*****)

Section 8-04.4 is supplemented with the following:

No separate measurement will be made for “Cement Conc. Pedestrian Curb” for curb ramps.

CIP Low profile barrier curb and transitions will be measured by the linear foot along the traffic facing side at the top of roadway.

All curb and gutter will be measured by the linear foot along the line and slope of the completed curbs, gutters, including bends.

8-04.5 **Payment**
(*****)

Section 8-04.5 is supplemented with the following:

No payment will be made for “Cement Conc. Pedestrian Curb”. All costs associated with constructing cement concrete pedestrian curb shall be included in the unit Contract price per each for each curb ramp being installed.

“CIP Low Profile Barrier Curb Type _____ and Transition”, per linear foot.

The unit bid price shall be full pay for the costs of all labor, tools, equipment and materials necessary to construct the barrier curb and transition.

“Cement Conc. Traffic Curb and Gutter”, per linear foot.

The unit bid price shall be full pay for the costs of all labor, tools, equipment and materials necessary to construct the curb and gutter, as shown in the Plans.

8-06 **CEMENT CONCRETE DRIVEWAY ENTRANCES**

8-06.1 **Description**
(*****)

Section 8-06.1 is supplemented with the following:

This work shall consist of constructing cement concrete driveway entrances shown in the Plans.

8-06.2 **Materials**

(*****)

Section 8-06.2 is supplemented with the following:

The cement concrete for the bid items listed in this section shall be air entrained concrete Class 4000 and shall meet the requirements of Section 6-02 as shown on the Plans. Concrete for the driveway and driveway entrance shall be 3-day mix.

8-06.3 **Construction Requirements**
(*****)

Section 8-06.3 is supplemented with the following:

All driveways shall remain open at all times to the adjacent property owners during construction of the concrete driveway, unless otherwise noted. The Contractor shall provide access to the adjacent owners during construction.

8-06.4 Measurement
(*****)

Section 8-06.4 is supplemented with the following:

“Concrete Residential Driveway” will be measured per square yard.

“Commercial At-Grade Driveway with Green Belt” will be measured per square yard.

8-06.5 Payment
(*****)

Section 8-06.5 is supplemented with the following:

“Concrete Residential Driveway”, per square yard.

The unit price per square yard for “Concrete Residential Driveway” shall include all costs of labor, materials, and equipment necessary to construct the driveway or driveway entrance, and perform the work as herein described, including forms, joints, surfacing materials, reinforcing steel, if necessary, and any and all equipment or materials necessary to protect the concrete until cured.

“Commercial At-Grade Driveway with Green Belt”, per square yard.

The unit price per square yard for “Commercial At-Grade Driveway with Green Belt” shall include all costs of labor, materials, and equipment necessary to construct the driveway or driveway entrance, and perform the work as herein described, including forms, joints, surfacing materials, reinforcing steel, if necessary, and any and all equipment or materials necessary to protect the concrete until cured.

8-12 CHAIN LINK FENCE AND WIRE FENCE

8-12.1 Description
(*****)

Section 8-12.1 is supplemented with the following:

This work consists of furnishing and constructing coated chain link fence.

8-12.2 Materials
(*****)

Section 8-12.2 is supplemented with the following:

Coated Chain Link Fence

Chain link fence fabric shall be hot-dip galvanized with a minimum of 0.8 ounce per square foot of surface area. All fabric edges shall be knuckled, regardless of fence type. No twisted or barbed fabric edges will be permitted.

Fencing materials shall be coated with an ultraviolet-insensitive plastic or other inert material at least 2 mils in thickness. Any pretreatment or coating shall be applied in accordance with the manufacturer's written instructions. The Contractor shall provide the Engineer with the manufacturer's written specifications detailing the product and method of fabrication. The color shall match Federal Standard 595 color number *** 27038 black *** ,or be as approved by the Engineer.

Samples of the coated fencing materials shall be approved by the Engineer prior to installation on the project.

The Contractor shall supply the Engineer with one aerosol spray can containing a minimum of 14 ounces each of paint of the color specified above. The touch-up paint shall be compatible with the coating system used.

Chain link fence fabric shall consist of 9 gauge nominal (0.148 inch actual diameter) coated wire with 2-inch opening mesh.

Submittals

The Contractor shall submit to the Engineer a completed "Request for Approval of Material" that describes the materials proposed for use to fulfill the Plans and Specifications. Included with that submittal shall be supplemental data including catalog cuts, product specifications and shop drawings. Any material purchased or labor performed prior to such approval shall be at the Contractor's risk. The Contractor must receive all approvals by the Engineer before materials will be allowed on the job site.

8-12.4 Measurement (*****)

Section 8-12.4 is supplemented with the following:

Coated chain link fence will be measured by the linear foot of completed fence, along the ground line, exclusive of openings. No separate measurement will be made for end, corner, pull posts, chain link fabric, hardware, concrete for post foundations, or attachments to walls.

8-12.5 Payment (*****)

Section 8-12.5 is supplemented with the following:

"Coated Chain Link Fence Type __", per linear foot.

The unit contract price for "Coated Chain Link Fence Type __" per linear foot shall be full pay for clearing of fence line; end, corner, and pull posts; chain link fabric; all necessary attachments and hardware; excavation and concrete footings in native or prepared soils; coring, grouting or other attachments to the walls; and all materials, labor, tools and equipment necessary for the complete installation of the fencing.

8-14 CEMENT CONCRETE SIDEWALKS

8-14.2 Materials (*****)

Section 8-14.2 is supplemented with the following:

Surface applied detectable warning surfaces shall not be allowed on this project. All detectable warning surfaces shall be designed for placement in fresh concrete and include manufacturer provided anchors.

Cement concrete sidewalks shall be constructed with Class 4000 air-entrained concrete conforming to the requirement of Section 6-02. Any sidewalk damaged, defaced, cracked, chipped, or determined to be of poor workmanship, in the opinion of the County, shall be removed, disposed, and replaced by the Contractor at the Contractor's expense. Damaged sidewalk shall be removed at construction or expansion joint. Sacking, grinding, or spot repaired will not be allowed. The Contractor shall further provide verbal and written notice (door hanger) to property owners abutting the project identifying restricted use of these facilities. This notice must be provided 1 week prior and again 1 day prior to the work being performed.

8-14.4 Measurement (*****)

Section 8-14.4 is supplemented with the following:

Type A Curb Ramp, Type C Curb Ramp, and Type D Curb Ramp will be measured per each for the complete curb ramp type installed and includes the installation of the detectable warning surface and pedestrian curb.

Concrete pad for surface mount furniture will be measured by the square yard of finished surface.

Playground Ramp will be measured per each for the complete curb ramp type installed and includes the installation of the playground curb and engineered wood fiber safety surfacing.

8-14.5 Payment (*****)

Section 8-14.5 is supplemented with the following:

"Type A Curb Ramp", per each

"Type C Curb Ramp", per each

"Type D Curb Ramp", per each

"Pedestrian Cut-Through", per each

The unit Contract price per each for "Type A Curb Ramp", "Type C Curb Ramp", "Type D Curb Ramp", and "Pedestrian Cut-Through", shall be full pay for installing the curb ramp as

specified, including Detectable Warning Surface and cement concrete pedestrian curb when shown on the Standard Plan for each respective ramp.

“Playground Ramp”, per each

The unit Contract price per each for “Playground Ramp” shall be full pay for installing the playground ramp as specified, including engineered wood fiber safety surfacing and playground curb when shown on the Standard Plan for each respective ramp.

“Concrete Pad for Surface Mount Furniture”, per square yard.

The unit Contract price per each for “Concrete Pad for Surface Mount Furniture” shall be full pay for construction of the concrete pads as shown in plans including all excavations including haul and disposal, regardless of the depth required for constructing the concrete pads to the lines and grades shown.

(*****)

Section 8-19, including title, is replaced with the following:

8-19 3-RAIL COMPOSITE FENCE

8-19.1 Description

This work shall include furnishing and installing 3-rail composite fence.

8-19.2 Materials

3-Rail Composite Fence

Post, board materials and fasteners for composite fence shall be per details as shown in the Plans and meet the requirements of Sections 9-09 and 9-16.

8-19.3 Construction Requirements

3-rail composite fence shall be installed as shown in the Plans.

8-19.4 Measurement

3-rail composite fence will be measured by the linear foot of completed fence, along the ground line, exclusive of openings.

8-19.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

“3-Rail Composite Fence”, per linear foot.

The unit contract price per linear foot for “3-Rail Composite Fence” shall be full pay for furnishing the materials and all labor, tools, equipment necessary for the complete installation

of the fence, including but not limited to lumber boards and posts and concrete footings, and hardware.

**8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT
TRANSPORTATION SYSTEMS, AND ELECTRICAL**

8-20.1 Description
(*****)

Section 8-20.1 is supplemented with the following:

Work includes, but not limited to furnishing and installing all materials necessary to provide installation of a new amber flashing beacon system, furnishing and installing all materials necessary to modify Traffic signal system at the intersection of 200th St SW/Cedar Valley Road, and furnishing and installing all materials necessary to provided installation of new illumination system along Scriber Creek Trail.

The work involves, but shall not be limited to, the supply, testing and installation of the following:

- Signal Poles and Foundations
- Electrical Service and Battery Backup Cabinets
- Combination Foundation and Installation of Electrical Service and Signal Controller Cabinets
- Signal and Pedestrian Heads
- APS Pedestrian Push Buttons
- Emergency Vehicle Preemption
- Junction Boxes
- Conduit and Wire
- Video detection cameras
- Signs
- Luminaires on signal poles
- Amber flashing beacons
- Pedestrian light standards
- Luminaires on pedestrian light standard

(*****)

Add the following new subsections:

8-20.1(4) Restrictions on the Schedule of Work

New Section

Work in Roadway

All work in the roadway is subject to the traffic control requirements specified in Special Provision sections 1-07.23(1) and 1-10.

Traffic Control During Construction

The Contractor shall include in the submitted traffic control plan, detailed plan during roadway trenching, and other activities requiring lane closures or detours. See special provision Sections 1-07.23(1) and 1-10.1 for traffic control requirements.

8-20.1(5) Errors and Omissions

New Section

The Contractor shall immediately notify the Engineer upon discovery of any errors or omissions in the Contract Documents, in the layout as given by survey points and instructions, or of any discrepancy between the Contract Documents and the physical conditions of the locality. If deemed necessary, the Engineer shall rectify the matter and advise the Contractor accordingly.

Any work done after such discovery without authorization by the Engineer will be done at the Contractor's risk.

8-20.2 Materials

(*****)

Section 8-20.2 is supplemented with the following:

Patented-Proprietary Materials

Public Interest Finding (PIF) documentation for specific materials required for the traffic signal and ITS system modifications has been prepared for the project and is included in the Project Manual. Materials from specific manufacturers as identified in the PIF documentation must be used for the Project. For these items identified in the PIF documentation, the Contractor shall:

- Acquire items from a manufacturer's authorized vendor;
- Deliver a copy of original invoice;
- Deliver items in unopened factory packaging;
- Coordinate with the Contracting Agency's representative for Traffic Signal and ITS equipment prior to opening any of the materials.

Contracting Agency contact for Traffic Signal and ITS equipment:

City of Lynnwood Shop
3430 195th Place SW
Lynnwood, WA 98036
Mike Thomas
Telephone: (425) 670-5236

The Contractor shall supply all materials required for signal, illumination and ITS work shown on the Plans and described in these special provisions.

The traffic signal cabinet shall be completely wired, including image processors for video detection, emergency vehicle detection discriminators, communications equipment, and fiber termination panels. Fiber termination panels shall include bulkheads and LC couplers. The UPS battery backup shall be installed within the traffic signal cabinet.

Video detection cameras shall be complete, including hardware, mounts and terminal enclosures. Extensions and mounts shall be a standard product that is recommended by the camera manufacturer.

8-20.2(1) Equipment List and Drawings
(*****)

Section 8-20.2(1) is supplemented with the following:

Manufacturer's data for materials proposed for use in the Contract, which require approval, shall be submitted in one complete package. The Engineer will review the material and return the information within 14 working days.

If traffic signal standards, strain pole standards, or combination traffic signal and lighting standards are required, final verified dimensions including pole base to signal pole mast arm connection point, pole base to light source distances (H1), mast arm length, offset distances to mast arm mounted appurtenances, and orientations of pole mounted appurtenances will be furnished by the Engineer as part of the final approved shop drawings prior to fabrication.

Contractor shall also transmit the following:

1. Product Data: Manufacturers' product data for traffic signal and signage materials.
2. Qualifications: Provide qualifications for Contractor and vendors for installing and testing optical fiber interconnect system.
3. Optical Fiber Factory Testing: Provide manufacturer's documentation of compliance with fiber specifications listed in TIA-598-D Optical Fiber Cable Color Coding.
4. Optical Fiber Interconnect System On-Site Testing: Provide copies of traces and test results.
5. Fiber Strand Testing Documentation: Provide testing documentation in accordance with 8-20.3(19).
6. As-built for mid-block crossing system and modifications to existing traffic signals.
7. Warranty: Provide manufacturer's warranty and assurance certification.

At completion of the optical fiber interconnect system Work, the Contractor shall provide a 20-year, Manufacturer's Warranty and Assurance Certificate for all new optical fiber cabling system runs. Certificate shall cover the optical fiber cables, strands, splices, enclosures, connectors, and pigtails, if used for terminating.

The Warranty and Assurance program shall also ensure that the installed fiber optic cabling system will support all emerging technologies standardized by the TIA/EIA-568 committee during the 20-year warranty program. The Warranty and Assurance program will include labor and replacement materials.

(*****)

Add the following new subsection:

8-20.2(2) Salvaging Equipment

New Section

The following signal equipment shall be disconnected, dismantled, and delivered to the City of Lynnwood:

- 2 x Type 2 signal standards
- 1 x Type 3 signal standard
- 10 x Vehicle signal displays
- 8 x Pedestrian signal displays
- 8 x Pedestrian Pushbutton Assemblies
- 4 x Video Detection Cameras
- 3 x EVP Detectors
- 1 x Traffic Signal Controller Cabinet and contents
- 1 x Service Cabinet and contents
- 2 x Street Light fixtures
- 3 x Street name signs
- 1 x Regulatory sign

Prior to delivery of the removed electrical equipment, coordinate with Mike Thomas. Removed equipment shall be delivered to:

City of Lynnwood Shop
3430 195th Place SW
Lynnwood, WA 98036
Mike Thomas
Telephone: (425) 670-5236

Five (5) working days written advance notice shall be delivered to both the Engineer and the Electronic Parts Specialist at the address listed above. Delivery shall occur during the hours of 8:00 a.m. to 2:00 p.m. Monday through Friday. Material will not be accepted without the required advance notice.

Equipment damaged during removal or delivery shall be repaired or replaced to the Engineer's satisfaction at no cost to the City of Lynnwood.

The Contractor shall be responsible for unloading the equipment where directed by the Engineer at the delivery site.

8-20.3 Construction Requirements

8-20.3(1) General

8-20.3(1)A Maintenance During Construction
(*****)

Section 8-20.3(1)A is supplemented with the following:

Coordinate with the Resident Engineer for modification to traffic signals. Notify the Engineer a minimum of 3 weeks in advance of any scheduled traffic signal work, including any work that will damage or destroy traffic loop detectors or in-pavement wireless detectors.

Access to controller cabinets and associated signal equipment must be available at all times. Space must be provided for door swing. Any fences, equipment and material storage shall not block access to signal equipment. Any costs and/or time loss incurred by City of Lynnwood crews in gaining access to blocked signal equipment will be at the Contractor's expense.

8-20.3(2) Excavating and Backfilling
(*****)

Section 8-20.3(2) is supplemented with the following:

Backfill all voids created by removal of foundations as shown in the Plans. Backfilling and compaction shall be performed in accordance with Section 2-09.3(1)E.

(*****)

Add the following new subsection:

8-20.3(2)A Resolving Utility Conflicts

New Section

The Contractor shall be responsible for determining the exact location of all utilities near underground work. The Contractor shall check with the utility companies concerning any possible conflict prior to commencing excavation in any area.

The Contractor shall be entirely responsible for coordination with the utility companies and arranging for the movement or adjustment, either temporary or permanent, of their facilities within the project limits.

If a conflict is identified, the Contractor shall contact the Engineer. The Contractor and City shall locate alternative locations for poles, cabinet, or junction boxes. The Contractor shall get approval from the Engineer prior to installation. The Contractor shall consider changing depth or alignment of conduit to avoid utility conflicts.

Before beginning any excavation work for foundations, vaults, junction boxes or conduit runs, the Contractor shall confirm that the location proposed on the Plans does not conflict with utility location markings placed on the surface by various utility companies. If a conflict is identified, the following process shall be used to resolve the conflict:

1. Contact the Engineer and determine if there is an alternative location for the foundation, junction box, vault, or trench. The Contractor may consider changing depth or alignment of conduit to avoid utility conflicts.
2. The Contractor and City shall locate alternative locations for poles, cabinets, or junction boxes. The Contractor shall get approval from the Engineer prior to installation.
3. If an adequate alternate location is not obvious for the underground work, Contractor shall select a location that may be acceptable and pothole to determine the exact location of other utilities. Potholing must be approved by the Engineer, shall be in accordance with Section 2-05, and will be paid by vertical foot.
4. If an adequate alternate location still cannot be identified following potholing operations, the pothole area shall be restored and Work in the area should stop until a new design can be developed.

The Contractor shall not attempt to adjust the location of an existing utility unless specifically agreed to by the utility owner.

8-20.3(4) Foundations
(*****)

Section 8-20.3(4) is supplemented with the following:

All excess materials from digging and constructing foundations shall be removed from the construction site and disposed of at the Contractor's expense.

Concrete foundations shall be placed against undisturbed earth if possible. CDF shall be used to backfill around pole foundations that are not placed against undisturbed earth. Before placing the concrete, the Contractor shall block out around any other underground utilities that lie in the excavated base so that the concrete will not adhere to the utility line. The Contractor shall secure the anchor bolts required for the item to be mounted on the foundation. The Contractor shall also securely locate all conduit required to be used to connect the pole or controller cabinet ground wire to the ground rod in the nearest junction box. Concrete foundations shall be troweled, brushed, edged, and finished in a workmanship-like manner. Concrete shall be promptly cleaned from the exposed portion of the anchor bolts and conduit after placement. Concrete and steel rebar shall be furnished and placed as shown in the Standard Plans. Concrete Class 4000P shall be used for all foundations.

After a curing period of 2 weeks, the Contractor may install the traffic signal controller cabinet, and service cabinet on the new foundations.

Where a foundation is placed adjacent to the back edge of the sidewalk, the top of the foundation shall be poured flush with the finished sidewalk grade. Where round foundations

are allowed, the top 4 inches shall be square in shape with sides equal to the diameter. If necessary, the sidewalk shall be notched around the foundation and a 3/4-inch through expansion joint shall be provided at all points where the foundation and sidewalk are in contact, such that the foundation can be removed without damage to the surrounding sidewalk. If no sidewalk exists, the top of the foundation shall be as shown on the Plans.

Location of all concrete foundations shall be approved by the Engineer prior to excavation. The foundations have been designed based on the information provided by the Geotechnical Engineer and current WSDOT foundation sizing standards.

All lines shall be a minimum of 18-inches below finished grade measured from the top of the pipe or as shown on the plans.

Street light foundations shall be per City of Lynnwood Drawing Number STD8-8.

8-20.3(5) Conduit

8-20.3(5)A General
(*****)

Section 8-20.3(5)A is supplemented with the following:

Remove and dispose of all wires for discontinued circuits from the conduit system. Abandoned conduit encountered during excavation shall be left in place. Remove abandoned conduit sweeps from existing junction boxes that are not removed by the project.

Where conduit is installed for future use, install a pull tape meeting the material requirements of section 9-29.1(10) and equipment grounding conductor. The pull tape shall be attached to duct plugs or caps at both ends of the conduit.

Conduit installation shall conform to Section 8-20.3(5) of the Standard Specifications except as supplemented or modified by these Special Provisions.

All conduit shall be rigid polyvinyl chloride Schedule 80 with molded end bell bushings unless otherwise specified and suitable for underground installation. All bends shall have a radius greater than 36 inches (914 mm). No 90-degree fittings shall be allowed. All conduits joined shall be sealed with an approved UV-Cement used for PVC conduits. Aluminum conduit shall not be used. All conduit shall be consistent with the requirements of Section 9-29.1 of the Standard Specifications.

The Contractor shall furnish and install all conduit and necessary fittings at the locations noted on the Plans. Conduit size shall be as indicated on the wire/conduit schedules. If the Contractor elects to use larger conduit without reasonable justification, the Contractor shall be responsible for any increase in cost due to other changes required.

When interconnect cable is part of a project, the conduit sweeps bringing the interconnect cable into and out of the junction boxes shall be offset as directed by the Engineer to accommodate the cable's tendency to curl.

Conduits entering the cabinet foundation shall be arranged as indicated in Plan sheet SG3, Detail 2.

All conduits containing fiber or labeled as "future fiber" shall contain a ½ inch polyester pull tape meeting the material requirements of section 9-29.1(10) and equipment grounding conductor. The pull tape shall be attached to duct plugs or caps at both ends of the conduit..

All conduits labeled as "future fiber" shall be plugged with a watertight duct plug designed specifically to prevent entrance of water and debris.

The conduits shall be cleared of dirt and debris before pulling wire or cable.

Fiber or future fiber conduits shall enter junction boxes as shown in Lynnwood Standard Plans 8-4A. All other conduits shall enter junction boxes as shown in Lynnwood Standard Plan 8-4.

8-20.3(5)E Method of Conduit Installation

8-20.3(5)E1 Open Trenching (*****)

Section 8-20.3(5)E1 is supplemented with the following:

The Contractor shall provide trenching as specified herein, regardless of the material encountered, as necessary for complete and proper installation of all conduits shown on the Plans.

All trenching areas shall be patched or covered by steel plates by the end of each work shift. Steel plates must be rated for heavy-duty traffic (H-20 loading as defined by AASHTO). Steel plates may require shims and temporary asphalt along the perimeter to accommodate traffic. Sound deadening materials and/or noise abatement measures associated with the steel plates may be required to comply with noise regulations and ordinances. A maximum of 300 feet of trench may be covered with steel plates. Trench backfilled with CDF shall be covered with steel plates for 24 hours to allow curing of CDF before paving.

Trenching by backhoe and hand digging shall conform to the following:

Uniform Construction

Trenching for conduit runs shall be done in a neat manner, and the trench bottom shall be graded to provide a uniform grade, with a width and depth as specified herein. All trenches for placement of conduit shall be straight and as narrow in width as practical to provide minimum of surface disturbance.

Trench Inspection

No work shall be covered until it has been examined by the Engineer and City Electrical Inspector. Earth which fills around and over the conduit shall be free of rocks greater than 2 inches up to a depth of 6 inches over the conduit. When trenching is being accomplished within unpaved areas, the backfill can be made with acceptable materials from the excavation as approved by the Engineer and shall be considered a necessary part of and incidental to the excavation in accordance with the Standard Specifications. Hauling and disposal of

unused excavation material shall be incidental to the cost of trenching or excavating. The compaction requirements for the roadway backfill shall apply.

Saw Cut for Trench

The Contractor shall make an effort to maintain the existing curb and gutter when connecting conduit into the sidewalk. Replacement of curb and gutter damaged during the trenching process will be considered incidental to the trenching bid items.

Thoroughly clean saw cuts where necessary by the use of high pressure water (1,400 psi or greater). All wastewater shall be collected and disposed of in accordance with section 1-07.15 of the Standard Specifications and these special provisions. Impervious surfaces contaminated from cutting operations shall be cleaned in accordance with section 1-07.15 of the Standard Specifications and these special provisions.

Collecting and disposal of wasted water shall be considered incidental to and included in the various bid items involved with the operation.

Trench Depth

Trench depth shall provide adequate cover so that the top of conduit(s) meets the minimum depth requirements of section 8-20.3(5)D unless agreed to otherwise by the Engineer.

CDF Backfill for Trench

All conduit runs with fiber optics or noted as containing "future fiber" shall be backfilled with CDF regardless of the surface material. Conduits installed in trenches backfilled with CDF shall be set on a 2-inch bed of sand. The trench shall be backfilled with 4 inches of sand on top of the conduit. Control Density Fill (CDF) containing a red dye shall be poured on top of the sand as shown in Lynnwood Standard Plan 6-16. For paved areas, the CDF shall fill the trench up to the base of the existing pavement or within 3 inches of finished grade (whichever is deeper) and covered with steel plates for 24 hours to prevent traffic contact with CDF. After the CDF has set, the trench shall be patched with asphalt concrete pavement or covered with the new sidewalk concrete. In unpaved areas, the CDF shall fill the trench to 12 inches from the existing grade and shall be covered with plywood until CDF has cured. CDF shall meet the requirements of Section 2-09.3(1)E of the Standard Specifications or as agreed by the Engineer.

Trenching, Concrete Sidewalk Areas

Trenching in sidewalk shall require removal and replacement of the concrete to the limits of the existing sidewalk joints or as directed by the Engineer.

Trenching and Restoration, Other Unpaved Areas

Trenches shall be placed to have minimum impact on existing landscaping and irrigation systems. Any damage due to the Contractor's operation shall be repaired or replaced at the Contractor's expense and to the satisfaction of the Engineer.

Trench Locating

An orange #18 AWG tracer wire shall be installed in the trench with all conduits containing fiber optics or noted as containing future fiber. The wire shall extend 12" into each junction box.

8-20.3(6) Junction Boxes, Cable Vaults, and Pull Boxes
(*****)

Section 8-20.3(6) is supplemented with the following:

All junction boxes shall be supplied by the Contractor. The locations of the junction boxes as shown in the Plans are approximate and the exact locations shall be determined in the field by the Engineer and Contractor. Junction boxes shall be located outside the traveled way, wheelchair ramps and landings, and driveways. New junction boxes shall not interfere with any other previous or relocated installation. The lids of junction boxes shall be flush with the frames and with the surrounding area whether it is shoulder, sidewalk, or other surface. Lids shall be engraved with "TS", "LT" or "COM" as indicated in City of Lynnwood Standard Plan 8-04A, Note 9.

Wiring shall not be pulled into any conduit until all associated junction boxes have been adjusted to, or installed in, their final grade and location, unless installation is necessary to maintain system operation. If wire is installed for this reason, sufficient slack shall be left to allow for future adjustment.

When junction boxes are installed or adjusted prior to construction of finished grade, pre-molded joint filler for expansion joints may be placed around the junction boxes. The joint filler shall be removed prior to adjustment to finished grade.

All junction box lids shall be grounded in a manner that will allow removal of the lid without breaking the ground. All Type 3 junction boxes shall have a dual lid per Special Provisions Section 9-29.2.

The Contractor shall maintain the integrity of all junction boxes during reconfiguration of the conduits, installation of new conduits or when excavating.

Add the following new subsection:

8-20.3(6)A Adjusting Junction Boxes

New Section

Existing junction box locations may be required to be adjusted horizontal and/or vertically. Distance between the top of conduit and bottom of new junction box lid shall be maximized but not exceed 12 inches. Existing conduits coming into and/or leaving a junction box shall be exposed and adjusted as required to fit into new junction box location. Hand digging shall be required during these adjustments.

8-20.3(8) Wiring
(*****)

Section 8-20.3(8) is supplemented with the following:

When installing new cabling in existing unoccupied conduit, the conduit shall be cleaned with a mandrel before pulling in the new cabling.

(March 13, 1995 WSDOT GSP, Option 1)

Field Wiring Chart

501 AC+ Input 516-520 Railroad Pre-empt
 502 AC- Input 5A1-5D5 Emergency Pre-empt
 503-510 Control-Display 541-580 Coordination
 511-515 Sign Lights 581-599 Spare

Movement Number 1 2 3 4 5 6 7 8 9

Vehicle Head

Red	611	621	631	641	651	661	671	681	691
Yellow	612	622	632	642	652	662	672	682	692
Green	613	623	633	643	653	663	673	683	693
Spare	614	624	634	644	654	664	674	684	694
Spare	615	625	635	645	655	665	675	685	695
AC-	616	626	636	646	656	666	676	686	696
Red Auxiliary	617	627	637	647	657	667	677	687	697
Yellow Auxiliary	618	628	638	648	658	668	678	688	698
Green Auxiliary	619	629	639	649	659	669	679	689	699

Pedestrian Heads & Dets.

Hand	711	721	731	741	751	761	771	781	791
Man	712	722	732	742	752	762	772	782	792
AC-	713	723	733	743	753	763	773	783	793
Detection	714	724	734	744	754	764	774	784	794
Common-Detection	715	725	735	745	755	765	775	785	795
Spare	716	726	736	746	756	766	776	786	796
Spare	717	727	737	747	757	767	777	787	797
Spare	718	728	738	748	758	768	778	788	798
Spare	719	729	739	749	759	769	779	789	799

Detection

AC+	811	821	831	841	851	861	871	881	891
AC-	812	822	832	842	852	862	872	882	892
Common-Detection	813	823	833	843	853	863	873	883	893
Detection A	814	824	834	844	854	864	874	884	894
Detection B	815	825	835	845	855	865	875	885	895
Loop 1 Out	816	826	836	846	856	866	876	886	896
Loop 1 In	817	827	837	847	857	867	877	887	897
Loop 2 Out	818	828	838	848	858	868	878	888	898
Loop 2 In	819	829	839	849	859	869	879	889	899

Supplemental Detection

Loop 3 Out	911	921	931	941	951	961	971	981	991
Loop 3 In	912	922	932	942	952	962	972	982	992
Loop 4 Out	913	923	933	943	953	963	973	983	993
Loop 4 In	914	924	934	944	954	964	974	984	994
Loop 5 Out	915	925	935	945	955	965	975	985	995
Loop 5 In	916	926	936	946	956	966	976	986	996
Loop 6 Out	917	927	937	947	957	967	977	987	997
Loop 6 In	918	928	938	948	958	968	978	988	998
Spare	919	929	939	949	959	969	979	989	999

8-20.3(9) Bonding, Grounding
(*****)

Section 8-20.3(9) is supplemented with the following:

In addition to the conductors called for in the contract, all conduit shall be installed with an equipment grounding conductor sized per NEC 250-122, with the exception that the minimum size shall be #8 AWG.

8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS) Cabinets
(*****)

Section 8-20.3(10) is supplemented with the following:

A 3-wire electrical service shall be used at 120/240 volts, single phase, 60 hertz AC between the power source and the service cabinet. The un-fused power shall enter the service cabinet through a separate conduit as indicated on the Plans.

The Contractor shall provide the service cabinet. The service cabinet shall be installed on the cabinet pad as shown in Plan sheet SG3, Detail 2.

The Contractor shall obtain an electrical permit, and have the service inspected by the City of Lynnwood Building Department Electrical Inspector and shall be solely responsible for coordination with the power company to have the service energized.

The Contractor is responsible for furnishing and installing ground rods and the associated ground rod conduits and junction boxes that are required for the service cabinet. Grounding of the service should be per WSDOT J-60.05-01 and the National Electric Code. The ground rods shall be located by the Contractor and approved by the engineer for installation. The rods shall be a minimum of 6 feet apart.

The connection to the underground power lines for service cabinet shall be made by the Snohomish County PUD. The Contractor shall furnish and install conduit and wire to the service transformer as well as furnish and install the conduit and wire. The Contractor shall contact Snohomish County PUD prior to installation to obtain specific material requirements and installation procedures.

8-20.3(11) Testing
(*****)

Section 8-20.3(11) is supplemented with the following:

All work shall be completed in a manner that provides the Inspector and Engineer with full knowledge of the construction. The inspector and Engineer may, at their option, require work completed without their knowledge or inspection to be dismantled so that it can be inspected to their satisfaction. Appropriate resistance and continuity tests shall be performed in the presence of the City Traffic Engineer, Inspector, or Signal Technician.

Contractor shall install on each approach leg a 36 inch by 36 inch "Signal Revision Ahead" sign (WSDOT Sign Fabrication Manual, W20-903) on a 4-inch by 6-inch wood post at a location staked by the Engineer prior to the signal turn-on.

During the signal changeover, traffic control shall be provided by Contractor-hired off-duty uniformed police officers having jurisdiction in the area.

Prior to scheduling a date, the Contractor shall provide verification to the Engineer that all tests required by the Engineer have been completed and shall have passed the electrical inspection with a copy of the Electrical Control Permit in the service cabinet. The Contractor shall provide the Engineer a minimum of seven (7) calendar days advance written notice of the proposed traffic signal changeover date and time. The traffic signal changeover procedure shall not begin until all required channelization, pavement markings, illumination, and signs are substantially complete and operational unless otherwise allowed by the Engineer. The Engineer shall have at least two days to completely check the traffic signal system before the Contractor will be given approval to start the changeover procedure.

The changeover from the existing to the new control equipment shall commence at 9:00 a.m. and be completed by 2:00 p.m. of the same day. The Engineer may allow variations on these hours depending on field observations.

The City traffic signal technician will program the controller and enter the timing data, then turn the traffic signal system to its flash mode to verify proper flash indications. The Contracting Agency electronics technician will then conduct functional tests to demonstrate that each part of the traffic signal system functions as specified. The Contractor shall conduct functional tests to demonstrate that each part of the illumination system, or other electrical system, functions as specified. These demonstrations shall be conducted in the presence of a Contracting Agency electronic technician and Traffic Engineer or his/her designee. The Contracting Agency electronics technician will then turn the traffic signal to stop-and-go operation for no less than one full cycle.

Based on the results of the turn-on, the Engineer will direct the City traffic signal technician to either turn the traffic signal on to normal stop-and-go operation, to turn the signal to flash mode for a period not to exceed five calendar days, or to turn the signal off and require the Contractor to cover all signal displays and correct all deficiencies.

8-20.3(14) Signal Systems

8-20.3(14)A Signal Controllers (*****)

Section 8-20.3(14)A is supplemented with the following:

The conduits entering the controller cabinet foundation shall be aligned exactly as shown in Plan sheet SG3, Detail 2.

8-20.3(14)B Signal Heads
(*****)

Section 8-20.3(14)B is supplemented with the following:

Unless directed by the Engineer, traffic and pedestrian signal heads shall not be installed at any intersection until all other signal equipment is installed and the controller is in place, inspected, and ready for operation at the intersection. The exception to this is that the traffic and pedestrian signal heads may be mounted if the faces are covered.

Add the following new subsection:

8-20.3(18) Optical Fiber Interconnect System

New Section

Description

The Contractor shall reroute existing single mode fiber optic (SMFO) cable and conduits through new junction boxes and fiber splice vault at shown on the Plans. To complete this work, the Contractor shall complete the following:

- Make a record of all existing terminations and patch cord connections in existing City Patch Cabinet PC41.
- Install new fiber splice vault and junction boxes in ADA compliant locations as shown on the Plans. Coordinate exact locations with City traffic signal technician.
- Disconnect and protect existing 12, 48, 84 and 96 SMFO LC terminations in PC41.
- Pull existing 48, 84 and 96 SMFO cables back to points beyond where existing conduits are to be intercepted and rerouted/extended to new fiber splice vault and/or junction boxes.
- Install new 12 SMFO between PC41 and new signal controller cabinet.
- Pull existing 48, 84 and 96 SMFO cables through new conduit paths and into PC41.
- Terminate all strands with LC connectors in PC41 to match existing terminations.
- Test the fiber optic system.

This fiber optic system supports communication to traffic signals for central signal system control and monitoring of the traffic signal. Fiber patch panels shall be provided in the new signal controller cabinet.

Qualifications of Contractor and Vendors

The Contractor must be able to demonstrate successful experience with LC connectors and fiberoptic systems. All submitting vendors must show demonstrated expertise in the field of placing and terminating large strand count optical fiber cables. The project manager, or supervisor responsible for the optical fiber work on this project, must have a minimum of 7-years of experience in the design and installation of outside plant optical fiber cabling systems. Fiber technicians must have current CFOT ® certification.

Submitting vendors shall also have a BICSI ® certified Registered Communications Distribution Designer (RCDD) review submittals for accuracy and compliance with industry practices.

Optical Fiber Cable Splices

If splicing is performed, the fiber optic cable splices shall be fusion type with local injection and detection for all fiber optic splicing. The fusion splice shall not exceed 0.10 dB loss per splice (bi-directional average); shall have a reflection less than 50 dB; and shall be stable from -40 degrees C to 85 degrees C. The average splice loss is defined as the summation of the attenuation as measured in both directions through the fusion splice, divided in half. No individual splice loss measured in a single direction shall exceed 0.30 dB maximum as required by TIA/EIA-758 and when measured in accordance with TIA/EIA 455-8 (FOTP 8) "Measurement of Splice or Connector Loss and Reflectance Using an OTDR".

All fusion splicing equipment shall be in good working order, properly calibrated, and meeting all industry standards and safety regulations. Cable preparation, closure installation and splicing shall be accomplished in accordance with accepted and approved industry standards.

Upon completion of the splicing operation, all waste material shall be deposited in suitable containers for fiber optic disposal, removed from the job site, and disposed of in an environmentally acceptable manner.

The Contractor shall seal all cables where the cable jacket is removed. The cable shall be sealed per the cable manufacturer 's recommendation with an approved blocking material.

All splices shall be contained in splice trays utilizing strain relief, such as heat shrink wraps with stainless steel stints (60mm long), as recommended by the splice tray manufacturer.

The Contractor shall notify the Engineer no less than five (5) working days prior to beginning any splicing and/or connectorization operations.

The Contractor shall submit to the Engineer for approval the resumes with references of people who will be performing splices. Splices shall be performed only by experienced personnel with experience including successful completion of no less than 2000 fusion splices. Only those individuals approved by the Engineer shall be allowed to make fiber optic splices.

The Contractor shall keep accurate detailed records of each splice and each splice location. These records shall include the date each splice was made, the name of the splicer, splice location, splice loss, fiber and tube color codes, splice tray number and position of the fiber within the tray.

To log the fiber routes, terminations and splices, the Contractor shall use a series of numbers and letters to describe the cable, tube, fiber and location of the termination or splice. The exact procedure used to log the splicing must be approved by the engineer before the splicing begins.

Warranty

At completion, the Contractor shall provide a 20-year, Manufacturer 's Warranty and Assurance Certificate for the newly installed optical fiber cabling system. Certificate shall cover the optical fiber cables and pigtails, if used for terminating.

The Warranty and Assurance program shall also ensure that the installed fiber optic cabling system will support all emerging technologies standardized by the TIA /EIA 568 committee during the 20-year warranty program. The Warranty and Assurance program will include labor and replacement materials.

Fiber Optic Cable Installation

Fiber optic cables shall be installed in continuous lengths without intermediate splices throughout the project. The Contractor shall comply with the cable manufacturer's specifications and recommended procedures including, but not limited to the following:

1. Installation.
2. Proper attachment to the cable strength elements for pulling during installation.
3. Bi-directional pulling.
4. Cable tensile limitations and the tension monitoring procedure.
5. Cable bending radius limitations.

The Contractor shall protect the loops from tangling or kinking. At no time during the length of the project shall the cable's minimum bending radius specification be violated.

To accommodate long, continuous installation lengths, bi-directional pulling of the fiber optic cable shall be permitted.

When power equipment is used to install fiber optic cabling, the pulling speed shall not exceed 100 feet per minute. The pulling tension limitation for fiber optic cables shall not be exceeded under any circumstances.

Large diameter wheels, pulling sheaves, and cable guides shall be used to maintain the appropriate bending radius. Tension monitoring shall be accomplished using commercial dynamometers or load-cell instruments.

Fiber optic cable lubricant shall be used to reduce pulling tensions for the installation of each fiber optic cable.

Fiber Optic Cable Labeling

New and reinstalled fiber optic cable shall be labeled in each junction box and cabinet with a cable tag similar to a ACP International CT-100 or approved equivalent. The cable tag shall properly identify the cable run, fiber count, origin and destination. The numbering/naming scheme shall be approved by the City before installation.

(*****)

Add the following new subsection:

8-20.3(19) Optical Fiber Interconnect System Testing

New Section

Prior to beginning testing of fiber optic cable, provide the Engineer with a test plan detailing methods of testing and a schedule for the tests. The test plan will include any required

jurisdictional personnel needed to support testing. The test plan shall be submitted with three hard copies plus a soft copy. The City shall have 14 Calendar days to approve the test plan. Testing cannot begin until the Contractor has received formal acceptance of the test plan. A minimum of two working days' notice shall be given to the Engineer before start of formal testing by the Contractor. No test or associated individual test procedure shall be deemed valid unless witnessed and signed by the Engineer or his appointed representative. The documented test results will be the formal test record.

Factory Testing

Supply manufacturer's documentation of compliance with fiber specifications listed in Fiber Characteristics Table. Test all fibers for attenuation before shipment, but while on shipping reel. Also, maintain copies on file for at least 7 years and attach a set to the cable reel in a waterproof pouch. OTDR techniques of measurement shall be utilized for point defects, length and attenuation.

Arrival On-Site Testing

Physically inspect cable and reel on delivery and measure attenuation for 100 percent of the fibers to demonstrate conformance with the requirements in this specification. Failure of any single fiber in the cable is cause for rejection of the entire reel. Test results shall be recorded, dated, compared and filed, with a copy accompanying shipping reel in a weather-proof envelope. Notify Engineer of attenuation deviations greater than five percent from the shipping records. Submit copies of traces and test results to Engineer. If test results are unsatisfactory, the reel of fiber optic cable shall be considered unacceptable and all records corresponding to that reel of cable shall be marked accordingly. Replace unsatisfactory reels of cable with new reels of cable at Contractor's expense. Test new reels of cable to demonstrate acceptability.

Do not install cable until the test sequence is complete and the Engineer provides written notice of acceptance of the cable.

Types of Testing

The types of acceptance testing for optical fiber cable system certification are:

Power Meter and Light Source Test

Optical Time Domain Reflectometer (OTDR) testing

Power Meter and Light Source Test

Insertion loss testing shall be used to measure end-to-end attenuation on each new fiber installed between a field device and a communications hub as well as between communications hubs. Insertion loss testing shall be performed at the 1310 and 1550 nanometer wavelengths in both directions in accordance with EIA Optical Test Procedure 171.

Prior to commencing testing, the Contractor shall submit the manufacturer and model number of the test equipment along with certification that it has been calibrated within 12 months of the proposed test dates.

The following information shall be documented for each fiber test measurement:

- Wavelength
- Fiber type Cable, tube and fiber IDs
- Near end and far end test locations
- End-to-end attenuation
- Date, time, and operator

Optical Time Domain Reflectometer (OTDR) Testing

An optical time domain reflectometer (OTDR) with recording capability shall be utilized to test the end-to-end transmission quality of each optical fiber. Quality tests shall consider both attenuation and discontinuities. The OTDR shall be equipped with 1310 nanometer and 1550 nanometer light sources for single mode optical fibers. The OTDR shall be capable of providing electronic and hard copy records of each test measurement.

The OTDR shall be equipped with sufficient internal masking to allow the entire cable section to be tested. This may be achieved by using an optical fiber pigtail of sufficient length to display the required cable section, or by using an OTDR with sufficient normalization to display the required cable section.

The Contractor shall record the attenuation of each optical link. Optical links shall be identified in the test results by identifying the label identifier on each drop cable and by identifying the field cabinet at which light was launched and at which it was received.

An acceptable OTDR shall be used to measure the backscattered light profile of the designated optical links. The OTDR shall include all necessary hardware to couple it to either a connectorized or non-connectorized fiber. While performing backscatter measurements, the end of the fiber link that is not connected to the OTDR shall be capped to prevent the ingress of infrared radiation. The OTDR used shall be provided with certification of its most recent calibration and shall not be more than 12 months old.

The OTDR testing shall be done at a scale of at least 1 dB per division on the vertical scale. It shall have a dynamic range of at least 30dB at 1310nm and distance measurement accuracy of $\pm 0.01\%$.

The Contractor shall perform all OTDR testing in the presence of the Engineer. The Engineer shall attach their written mark to all test documentation made by the Contractor at the time of the test. Testing performed by the Contractor and not witnessed by the Engineer shall not be accepted, re-testing will be required.

The Contractor shall record each optical link measured for attenuation by means of an electronic data file of the OTDR trace. The Contractor shall supply a licensed software package to read, store, compare, and analyze the electronic data files created by the OTDR instrument. A hard copy printout of each trace shall also be provided, which shall include the measurements listed below. The OTDR traces shall be compared with this Software following each testing stage of the installation. Documentation of this comparison shall be provided to the Engineer, as specified above. Optical links shall be designated in the test results by indicating the label identifier on each drop cable and by identifying the field cabinet at which

light was launched. The following information shall be documented for each fiber test measurement:

- Total measured length of optical link
- Total end-to-end attenuation of the optical link (dB), not including launch cable
- End-to-end attenuation per unit length (dB/km), not including launch cable
- Mean attenuation of each splice in the optical link under test (dB)
- Wavelength of the measurement (nm)
- Date and time of the test
- Cable ID number
- Fiber color or ID
- Operator name
- Refraction index
- Fiber type
- Averaging time
- Pulse width
- Near end and far end test locations
- Event table that includes: event ID, type, location, loss, and reflection.

Loss Budget

The Contractor shall document the anticipated loss in each fiber by the following equation:

$$\text{Anticipated Loss} = (L_a * k_{mr}) + (0.2 \text{ dB} * N_c) + (0.1 \text{ dB} * F_s)$$

Where

L_a = Design cable loss (dB) per kilometer

k_{mr} = Kilometers of fiber in the link

dB = Decibel

N_c = Number of connectors in the fiber link

F_s = Number of fusion spliced in fiber link

Actual measured loss numbers for the installed link shall be calculated by taking the sum of the bi-directional measurements and dividing that sum by two. The Contractor shall bring into compliance any link where the actual measured loss is greater than the anticipated loss. The Contractor shall take corrective measures to bring the cable's total attenuation below the allowable limit, including replacement of the cable at the Contractor's expense.

Fiber Cable Testing Documentation

The Contractor shall submit one hard copy and one electronic copy of the fiber test results to the Engineer for approval. The Contractor shall take corrective actions on portions of the fiber installation determined to be out of compliance with these specifications.

The City shall be given 14 calendar days to review the test results. Fiber optic cable installation cannot begin until the pre-installation test results have been accepted by the City.

Upon acceptance of the cable installation and test results, the Contractor shall submit three hard copies and one electronic copy of the fiber test results to the Engineer.

Hard copy submittals shall be bound in 3-ring binders. The electronic submittal shall be on compact disk and include one licensed copy of the applicable OTDR reader program.

The following information shall be included in each test result submittal:

1. Contract number, contract name, contractor name and address.
2. Dates of cable manufacture, installation, and testing.
3. Cable specifications.
4. Location of all splices.
5. OTDR test results.
6. Attenuation test results.

Within 30 days of submitting the test results, the Contractor, in the presence of the Engineer, shall re-test a minimum of 5% of the previously tested locations to validate the test results. A 5% sample will be selected randomly from the terminal device locations.

Test Failure

If the link loss measured from the power meter and light source exceeds the calculated link loss, or the actual location of the fiber ends does not agree with the expected location of the fiber ends (as would occur with a broken fiber), the fiber optic link will not be accepted. The Contractor will be required to replace the unsatisfactory cable at the Contractor's expense.

8-20.4 Measurement

(*****)

Section 8-20.4 is supplemented with the following:

No specific unit of measurement will apply to the lump sum items of "Illumination System, Complete", "Traffic Signal System, 200th St/Cedar Valley Rd (Modified)" and "200th St Midblock Crossing".

8-20.5 Payment

(*****)

Section 8-20.5 is supplemented with the following:

The lump sum Contract price for “Illumination System, Complete”, “Traffic Signal System, 200th St/Cedar Valley Rd (Modified)” and “200th St Midblock Crossing” shall be full pay for the construction of the complete electrical system, removal and modification of existing systems, or both, including sign lighting systems, as described above and as shown in the Plans, and herein specified, including excavation, backfilling, concrete foundations, conduit, wiring, restoring facilities destroyed or damaged during construction, salvaging existing materials, and for making all required tests.

All costs to adjust new junction boxes to grade shall be incidental to the bid item for construction the structure or furnishing the casting as applicable.

Where illumination conduit and/or trench is shared with traffic signal system conduit and/or trench, the price shall be included in lump sum price of the traffic signal system.

Light fixtures on signal poles shall be included in the lump sum price of the traffic signal system.

All fiber optic work shall be included in the lump sum price of the traffic signal system

The new service cabinet and service connection shall be included in the lump sum price of the traffic signal system.

Mast arm signs are not included in the lump sum price of the traffic signal system. See Special Provisions Section 8-21.

8-21 PERMANENT SIGNING

8-21.1 Description

(*****)

Section 8-21.1 is supplemented with the following:

This work shall include providing and installing roadside and trail signage and mast arm signs as shown on the Plans.

8-21.5 Payment

(*****)

Section 8-21.5 shall be supplemented with the following:

“Permanent Signing”, per Lump Sum.

The lump sum bid price for “Permanent Signing” shall be full compensation for all labor, materials, tools, and equipment necessary for furnishing and installing new signs, posts, and

hardware as shown on the Plans. Costs for sign removal and sign relocation shall also be included in this bid price.

Installation of signs mounted on signal poles and removal of existing signal pole mounted signs are included in the lump sum bid price for "Permanent Signing".

8-22 PAVEMENT MARKING

8-22.1 Description (*****)

Section 8-22.1 is supplemented with the following:

This work shall include providing and installing preformed thermoplastic warning band as shown on the Plans.

8-22.2 Materials (*****)

Section 8-22.2 is supplemented with the following:

Thermoplastic pavement markings for warning band shall use Type B – Pre-Formed Fused Thermoplastic per Section 9-34.3(2).

8-22.3 Construction Requirements (*****)

Section 8-22.3 is supplemented with the following:

Preformed thermoplastic warning band shall be installed per manufacturer's recommendations.

8-22.4 Measurement (*****)

Section 8-22.4 is supplemented with the following:

Preformed thermoplastic warning band will be measured per each. Each complete warning band shall three 4-inch wide bands as indicated in the plan.

Measurement for "Removing Raised Pavement Marker" will be measured by the HUND.

8-22.5 Payment (*****)

Section 8-22.5 is supplemented with the following:

"Preformed Thermoplastic Warning Band", per each.

The unit Contract price per each for “Preformed Thermoplastic Warning Band” shall be full payment for all costs to perform the Work as described in Section 8-22.

“Removing Raised Pavement Marker”, per HUND.

The unit Contract price per HUND for “Removing Raised Pavement Marker” shall be full payment for the costs of all labor, tools, equipment, and materials necessary or incidental to completely remove all raised pavement marker as shown in the Contract Plans and where directed by the Owner. No additional payment will be made for preparation of the paved surfaces as necessary prior to installing new pavement markings.

(*****)

Add the following new section:

8-30 TRAIL AMENITIES NEW SECTION

8-30.1 Description

This work consists of furnishing and constructing kiosks, benches, picnic tables and trash receptacles on concrete pads or in gravel paving where specified at the locations and in accordance with the details shown in the Plans and these Specifications and in conformity to lines and dimensions shown in the Plans.

8-30.2 Materials

Bench

Bench shall be TimberForm Greenway model 2153-8 Contour recycled plastic 8-foot bench with black powder coated frame or approved equal. Supports shall be surface mount brackets for installation on concrete pad and made for direct embedment where installed in gravel paving.

Picnic Table

Picnic Table Shall be UltraSite Heavy Duty Rectangular model 238H-U (double-sided ADA accessible) and model UltraSite 238-U (not ADA accessible) or approved equal. Both model tables shall be 8-foot long, recycled plastic, cedar color. See Plans for accessible and non-accessible table locations.

Trash and Recycling Receptacles

Trash receptacle and Recycling receptacle shall be UltraSite Model #JK-36RB or approved equal outdoor slatted steel, surface mount with rain bonnet top and with liner. Trash can shall be green and recycling can shall be blue.

Bike Rack

Bike Rack shall be Dero Downtown rack, Columbia Cascade Original FrameGuard 2177-01 or Sportworks Tofino™ No Scratch® Bike Rack or equal stainless steel surface mounted bike rack.

Kiosk

Kiosk shall be RCP Shelter, Inc. model TS-G0508-2P-04-MB. Foundation shall be designed and constructed by Contractor per IBC code and manufacture’s recommendation. Shop

drawings for kiosk and foundation shall be stamped by a licensed engineer in the State of Washington. Colors for Kiosk shall be black Matte for the metal roof; Natural 716 for the wood soffit; and black satin for the powder coated frame.

Concrete pads for bench, accessible picnic tables and trash receptacle shall be where shown and as dimensioned in plans and shall meet the requirements for Section 8-14, "Concrete Pad for Surface Mount Furniture" and 6-02.

8-30.3 Construction Requirements

Bench, picnic tables, trash receptacle and bike racks shall be placed per details shown on the Plans and shall be installed per manufacturers' recommendations. Concrete pad and concrete footing shall be in accordance to Section 6-02. Benches and kiosks located in gravel paving shall be mounted on footings as shown in plan details. Stake locations of all site amenity furnishings for approval by the Engineer prior to installation.

8-30.4 Measurement

Benches, picnic tables will be measured per each furnished and installed.

Both ADA accessible and non ADA accessible picnic tables will be measured per each furnished and installed.

Trash and recycling receptacles will be measured per each receptacle furnished and installed.

Bike racks will be measured per each furnished and installed.

Kiosk installation will be measured per each installed.

8-30.5 Payment

Payment will be made for each of the following Bid items that are included in the proposal:

"Bench", per each

The unit contract price per each for "Bench", shall be full pay for all labor, equipment, and materials necessary, including but not limited to, for assembly, placement, hardware, and installation of specified bench on concrete pad or in gravel with concrete footing.

"Picnic Table", per each

The unit contract price per each for "Picnic Table", shall be full pay for all labor, equipment, and materials necessary, including but not limited to, for assembly, placement, hardware, and installation of specified picnic table.

"Trash and Recycling Receptacle", per each.

The unit contract price per each for "Trash and Recycling Receptable" shall be full pay for all labor, equipment, materials, and hardware necessary for furnishing and for installation of the receptacle on concrete pad.

“Bike Rack”, per each

The unit contract price per each for “Bike Rack”, shall be full pay for all labor, equipment, and materials necessary, including but not limited to, for assembly, placement, hardware, and installation of specified bike rack on concrete pad.

“Kiosk”, per each

The unit contract price per each for “Kiosk”, shall be full pay for all labor, equipment, and materials necessary, including but not limited to, assembly, design and construction of concrete footing, placement, hardware, and installation of kiosk.

(*****)

Add the following new section:

8-31 CONCRETE WHEEL STOP NEW SECTION

8-31.1 Description

This work consists of furnishing and constructing precast concrete wheel stop for vehicular parking stalls as shown in the Plans.

8-31.2 Materials

Precast wheel stop shall be 3.5 percent minimum air-entrained concrete; 4000 psi minimum compressive strength. Each stop shall be reinforced with two No. 4 deformed steel reinforcing bars, minimum. Provide chamfered corners and provide holes for dowel-anchoring to substrate. Unless indicated otherwise, provide stops of half octagonal configuration and 72-inch length as shown in the Plans.

Adhesive for bonding steel spike to wheel stop for installing on gravel surfaces shall be required as recommended by the manufacturer and approved by the Engineer.

All hardware shall be 0.5-inch diameter galvanized steel spike or galvanized lag bolt, anchor, and washer.

8-31.3 Construction Requirements

Wheel stop shall be placed per details shown on the Plans and shall be anchored to surface per the manufacturer’s recommendations.

Verify locations of all the wheel stop with the Engineer prior to installation.

8-31.4 Measurement

Wheel stop will be measured per each furnished and installed.

8-31.5 Payment

Payment will be made for each of the following Bid items that are included in the proposal:

“Wheel Stop”, per each.

The unit contract prices per each for “Wheel Stop” shall be full pay for all labor, equipment, materials, and hardware necessary for installation.

8-54 BOLLARDS

NEW SECTION

Add the following new section:

(*****)

Description

This work shall consist of furnishing and installing steel bollards in accordance with the Plans, WSDOT Standard Plans H-60.10-01 (Type 1) and H-60.20-01 (Type 2), and these Specifications, at the locations shown in the Plans or as staked by the Engineer.

Materials

Posts and Hardware

Type 1 and Type 2 bollard posts shall be ASTM A 53, NPS 3 (3” Nom.) schedule 80 steel pipe. Post sleeves shall be ASTM A 53, NPS 4 (4”Nom.) schedule 40 steel pipe.

Steel plate shall be per ASTM A 36.

All steel parts shall be hot-dip galvanized after fabrication in accordance with AASHTO M 111.

Reflective Tape

Reflective tape shall be one of the following or an approved equal:

Scotchlite High Intensity Grade Series 2870

Reflexite AP-1000

Scotchlite Diamond Grade LDP Series 3970

T-6500 High Intensity (Type IV)

Concrete

Footings shall be constructed using concrete Class 3000.

Padlock

Contractor shall provide Knox padlock for removable bollards.

Construction Requirements

Bollards shall be constructed in accordance with the Standard Plans.

Bollards shall not vary more than 1/2 inch in 30 inches from a vertical plane.

Bollard posts and the exposed parts of the base assembly shall be painted in accordance with Section 6-07.3(11) for galvanized surfaces. The top coat shall match SAE AMS Standard 595, Color No. 33538 Traffic Signal Yellow.

Measurement

Measurement for bollards will be by the unit for each type of bollard furnished and installed.

Payment

Payment will be made for the following bid items when included in the proposal:

“Bollard Type ____”, per each.

END OF DIVISION 8

Tested Item	Method*	Units	Specification Range
pH 1:1	S-2.20	S.U.	5.5 – 7.5
E.C. 1:1	S-2.20	mmhos/cm	≤ 2
Nitrate Nitrogen	S-3.10	mg/Kg	***
Ammonium Nitrogen	S-3.50	mg/Kg	***
Organic Matter	S-9.10	%	3 – 10
Phosphorus (P)	S-4.20 (Bray)	mg/Kg	***
Calcium (Ca)	S-5.10 (NH ₄ OAC)	meq/100g	***
Magnesium (Mg)	S-5.10 (NH ₄ OAC) S-6.11 (DTPA/Sorbitol)	meq/100g Mg/Kg	***
Sodium (Na)			***
Potassium (K)			***
Zinc (Zn)			***
Manganese (Mn)	S-6.11 (DTPA/Sorbitol) EPA 908/S- 10.10	Mg/Kg meq/100g	***
Copper (Cu)			***
Iron (Fe)			***
Sulfur (SO ₄ -S)			***
Boron (B)			***
Molybdenum (Mo)			***
Cation Exchange (CEC)			5 Min.
Total Nitrogen			AOAC 990.3
Total Carbon	AOAC 972.3	%	***
C:N Ratio			20:1 or less
Exchangeable Sodium Percentage (ESP)	ESP	%	10 Max.
Particle Size Analysis (Sand, Clay, Silt)	S-14.10 (Hydrometer)	%	Sandy Loam
Heavy Metals Testing	EPA 6010D	mg/Kg	From WAC 173-350-220 Table 220-B unless otherwise noted
Arsenic			≤ 20
Cadmium			≤ 10
Chromium			≤ 42**
Copper			≤ 100**
Lead			≤ 150
Molybdenum			≤ 9
Nickel			≤ 100**
Selenium			≤ 18
Zinc			≤ 270**
Mercury			EPA 7473

Tested Item	Method*	Units	Specification Range
	*Methods are from "Soil, Plant, and Water Reference Methods For the Western Region" 2005, 3rd Ed., Dr. R. Gavlak, Dr. D. Horneck, Dr. R.O. Miller.		**From WAC 173-340-900 Table 749-2 for Unrestricted Land Uses ***Testing for soil-testing laboratory recommendations for soil treatments and amendments

The soil-testing laboratory shall state recommendations for soil treatments and soil amendments to be incorporated based on the results of the tests. Recommendations shall be in pounds per acre, or volume per cu. yd. for nitrogen, phosphorus, potash nutrients, and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.

Compost

Compost shall conform to the requirements of Section 9-14.5(8).

Mixing Requirements

Topsoil Type A shall be thoroughly mixed by the supplier prior to delivery to the site. The Contractor shall submit certification from the supplier that the Topsoil Type A has been mixed according to the above percentages at the point of delivery.

Acceptance of Topsoil Type A for use on a project shall be on the basis of visual verification by the Engineer that the delivered material is representative of the laboratory analysis documentation and certification.

9-14.3 Seed (*****)

Section 9-14.3 is supplemented with the following:

Lawn seed shall be Wilbur Ellis Premium Sun to Shade or approved equal.

(NWR September 12, 2019, Option 3)

Erosion Control Seed

Seed of the following composition, proportion, and quality shall be applied at a rate of 25 pounds per acre on areas requiring seeding, fertilizing and mulching:

Kind and Variety of Seed in Mixture	Pounds of Pure Live Seed Per Acre
Rough Bentgrass (<i>Agrostis scabra</i>)	1.3
Creeping Red Fescue (<i>Festuca rubra</i> <i>ssp. rubra</i>)	16.0
Crimson Clover (<i>Trifolium</i> <i>incarnatum</i>)	

Kind and Variety of Seed in Mixture	Pounds of Pure Live Seed Per Acre
California Poppy (<i>Eschscholzia californica</i>)	2.5
Common Yarrow (<i>Achillea millefolium</i>)	0.1
Red Columbine (<i>Aquilegia formosa</i>)	1.8
Pacific Lupine (<i>Lupinus lepidus</i>)	<u>1.8</u>
TOTAL	25.00

9-14.4 Fertilizer

The first paragraph of Section 9-14.4 is replaced with the following:

(NWR September 12, 2019, Option 1)

Fertilizer shall be registered with the Washington State Department of Agriculture (WSDA) Organic Program. Fertilizer shall not contain raw manure and shall be inoculated with Organic Materials Review Institute (OMRI) certified mycorrhizal fungi in a pelleted or granular form. Mycorrhizal fungi may be added by the manufacturer or it may be added separately to the fertilizer blend at the rate specified by the manufacturer.

Fertilizer shall have the following Guaranteed Chemical Analysis (N-P-K):

N: 4 to 8
P: 1 to 4
K: 1 to 4

Water insoluble N shall be a minimum of 50% of the total available Nitrogen in the fertilizer.

Fertilizer shall be furnished in a standard, unopened, container with weight, name of plant nutrients, and manufacturer's guaranteed statement of analysis clearly marked, all in accordance with State and Federal laws. The mycorrhizae product shall have a label specifying the number of viable propagules per unit weight.

9-14.5 Mulch and Amendments

9-14.5(1) Straw *(*****)*

This section is supplemented with the following:

Straw mulch material shall be derived from harvested wheat or alfalfa plant stalk. Hay from grass source will not be accepted as a substitute material.

(*****)

Add the following new sections:

9-14.9 Time-Release Watering Tube And Insert New Section

The time-release watering tube shall be a moisture delivery system consisting of a minimum 2-inch-diameter by 9 inch-long (Schedule-40 PVC or H.D.P.E.) tube, with a natural, non-toxic, 100 percent biodegradable gel pack insert. The gel pack shall be formulated for plant establishment, and the system shall slowly deliver moisture to the plant for a minimum period of 60 days. Three products acceptable for this application are the “DWP-TG” manufactured by DriWater, Inc., 1042 Hopper Avenue, Santa Rosa, CA 95403, (800) 255-8458 (web site: www.driwater.com); “Soil Moist” paks by JRM Chemical, 4881 NEO Parkway, Cleveland, Ohio, (800) 962-4010 (web site www.soilmoist.com); and “TRWGP2IN” a Time Release tube manufactured by Rainbird Irrigation Corporation, 970 West Sierra Madre Ave. Azusa, CA 91702, (626) 812-3400 (web site www.rainbird.com).

9-14.10 Habitat Structures New Section

Source of Material

The Contractor shall submit the source(s) of materials for habitat structures to the Engineer for approval at least 10 working days prior to use. Where practical, the Contractor shall salvage and reuse trees meeting the materials requirements in these Special Provisions that are identified in the Plans for removal.

Habitat Logs shall be a 10- to 15-foot-long trunk of a native coniferous tree species, 8-inch-minimum trunk diameter, with branches intact.

Habitat Brush Piles shall consist of woody material, including trees, stumps, branches, brush, and roots of native trees and shrubs. Approximately one third of the woody material shall consist of material with the main trunks and branches varying between 3 and 6 inches in diameter and 3 to 5 feet in length. Approximately one third of the woody material shall consist of material with the main trunks and branches varying between 8 and 18 inches in diameter and 6 to 12 feet in length. For the remaining third of vegetation trunks, roots and branches smaller than 3 inches in diameter are acceptable. No noxious weed or undesirable vegetation as listed in Section 8-02.3(2)B shall be included in brush piles.

9-29 ILLUMINATION, SIGNAL, ELECTRICAL

9-29.1 Conduit, Innerduct, And Outerduct

(*****)

Section 9-29.1 is supplemented with the following:

PVC solvent cement shall be medium-bodied gray and shall meet ASTM D 2564 including note 8 (label to show pipe sizes for which the cement is recommended).

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes
(*****)

Section 9-29.2 is supplemented with the following:

All junction boxes shall be Type 1, Type 2 or Type 3, in accordance with City of Lynnwood Standard Detail No.'s 8-3, 8-4 and 8-4A.

(September 3, 2019 WSDOT GSP, Option 1)

Slip-Resistant Surfacing for Junction Boxes, Cable Vaults, and Pull Boxes

Where slip-resistant junction boxes, cable vaults, or pull boxes are required, each box or vault shall have slip-resistant surfacing material applied to the steel lid and frame of the box or vault. Where the exposed portion of the frame is ½ inch wide or less, slip-resistant surfacing material may be omitted from that portion of the frame.

Slip-resistant surfacing material shall be identified with a permanent marking on the underside of each box or vault lid where it is applied. The permanent marking shall be formed with a mild steel weld bead, with a line thickness of at least 1/8 inch. The marking shall include a two character identification code for the type of material used and the year of manufacture or application. The following materials are approved for application as slip-resistant material, and shall use the associated identification codes:

1. Harsco Industrial IKG, Mebac #1 - Steel: **M1**
2. W. S. Molnar Co., SlipNOT Grade 3 – Coarse: **S3**
3. Thermion, SafTrax TH604 Grade #1 – Coarse: **T1**

(*****)

Add the following new subsection:

9-29.2(6) Optical Fiber Splice Vaults

New Section

Where indicated in the Plans, the Contractor shall provide an optical fiber splice vault to house optical fiber cable slack. The splice vault shall be constructed per Lynnwood Standard Plan 8-30. Installation and placement of the splice vault and restoration of areas around the splice vault shall conform to requirements for junction boxes as detailed in the Standard Specifications. Slack loops shall be neatly coiled on a showshoe bracket in each splice vault to minimize stress on the cables.

The splice vault shall be a commercially available product made from reinforced concrete. The vault shall have a “C” channel bracket 1.2 meters long mounted to one side at 2-inches above, and parallel to the vault floor. The vault shall have a 1.25-inch diameter lift hole in each side and six 0.6-inch diameter pulling inserts inside on the side (four) and end (two walls).

Each splice vault lid shall be in two pieces, hinged on the ends and opening out from the middle of the vault, for ease of maintenance access. The lid shall be .25-inch plate steel, and the lid and steel frame shall be galvanized. Each half of the lid shall nest firmly in the vault frame and against each other to prevent cracks or spaces greater than 0.25-inch width. There

shall be no holes or unplugged openings in the lid. The lid pieces shall be diamond textured on top to prevent slipping if walked on, and shall have the ability to be bolted shut for system security.

Conduit entries shall be sealed to prevent water intrusion.

9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable

9-29.3(1) Fiber Optic Cable (*****)

Section 9-29.3(1) is supplemented with the following:

Pre-Approval of Components

To assist in identifying the type of fiber cables and associated components desired on this project, OFS part numbers were used. Equivalent product(s) may be considered for substitution for those specified. Documentation showing equivalency shall include, but is not limited to, product samples, data sheets, and actual test data. The request for product substitution, and supporting documentation, must be received, in writing by the City of Lynnwood by the close of business on the day of the pre-bid conference.

Written approvals for any product substitutions for the interconnect and communication systems must be submitted with the bid.

Equipment List and Drawings

Manufacturer's technical information shall be submitted for all optical fiber cables, splice closures, junction boxes and termination components.

On the initial submittal, the Engineer shall have 14 calendar days to review all information submitted.

The Contractor must receive all approvals by the Engineer before materials will be allowed on the job site. Materials not approved will not be permitted on the job site.

Review or approval of shop drawings does not constitute final acceptance or guarantee of the material, but is solely to assist the Contractor in providing the specified materials.

Central Core Optical Fiber Cables

Cables shall be central core, loose buffer tube in groups of 12 strands, water blocking, dielectric, non-armored cables with total number of strands specified in the Plans. The outside cable diameter shall not exceed 0.51 inches.

Sheath Construction

Optical fiber cables shall have a central core tube of high-density polyethylene (HDPE) containing the fibers, and an outer sheath of HDPE. The cable shall have the strength members installed outside the core tube to provide a more robust package while minimizing stress on the optical fibers.

The cable shall consist of a water blocking tape, two groups of glass strength members longitudinally applied, diametrically opposed to each other, and an outer sheath of HDPE. Ripcords shall be located along the strength members for easy sheath entry.

The cable core shall consist of an extruded HDPE jacket covering the fiber strand(s), filled with a filling compound. The basic building block of the cable core shall be tube units of 12 fiber strands, each.

The cable shall have a continuous installation tensile strength rating that is a minimum of 600-pounds.

Cable Qualification Testing

Test	Requirement	Standard Testing Method
Filling Compound – Filling compound is injected into the cable core to prevent ingress of water	Pass	EIA/TIA-455-81A
<i>Tensile Loading and Bending (max. added loss)</i>		
Single Mode	100% ≤ 0.15 dB	EIA/TIA-455-33A
<i>Cable Cyclic Flexing (max. added loss)</i>		
Single Mode	100% ≤ 0.15 dB	EIA/TIA-455-104
<i>Cyclic Impact (max. added loss)</i>		
Single Mode	100% ≤ 0.15 dB	EIA/TIA-455-25A
<i>Compressive Loading (max. added loss)</i>		
Single Mode	100% ≤ 0.15 dB with 250 lbf/in load	EIA/TIA-455-41
<i>Twist (max. added loss)</i>		
Single Mode	100% ≤ 0.15 dB	EIA/TIA-455-85
<i>Low and High Temperature Bend (max. added loss)</i>		
Single Mode	100% ≤ 0.15 dB	EIA/TIA-455-37
<i>External Freezing (max. added loss)</i>		
Single Mode	100% ≤ 0.15 dB	EIA/TIA-455-98A
<i>Fiber Stripability (max. added loss)</i>		
Single Mode	≥ 1,3N and ≤ 8.9N	EIA/TIA-455-178
<i>Temperature Cycling (max. added loss)</i>		
Single Mode	≤ 0.05 dB mean, ≤ 0.15 dB max	EIA/TIA-455-3
<i>Cable Aging (max. added loss)</i>		
Single Mode	≤ 0.25 dB	EIA/TIA-455-3

Test	Requirement	Standard Testing Method
<i>Compound Drip</i>		
Single Mode	80°C, 24 hour duration, no drip	EIA/TIA-455-81

(*****)

Add the following new subsection:

9-29.3(1)C Fiber Optic Connectors

New Section

The field fiber cable must be terminated in each controller cabinet identified on the project either through field connectorization of all strands in each 12 strand truck cable or through a splice in the terminal panel to a preconnectorized strand. With either strand termination method, the insertion loss through the connector or through the connector and splice (excluding the additional cable length) shall not exceed 0.4 dB (bi-directional sum). Splicing in the back of the termination panels will not be allowed, unless the termination panels provide a suitable area for splice trays.

Non-angled LC simplex optical fiber connectors shall be used to terminate the fiber in the back of the existing termination shelf in the existing fiber optic cabinet and in back of the City-furnished termination panel in the traffic signal cabinet. LC connectors shall be one half the size of an SC connector, and shall have an insertion release mechanism similar to the ordinary telephone plug. The connector shall be Telcordia (Bellcore), ANSI/EIA/TIA, and IEC compliant and shall meet the following specifications:

Fiber Type	Single Mode
Ferrule Diameter	125.5 μm
Insertion Loss μσ	0.06, 0.06 dB
Return Loss Reflection	at least -55 dB
Mating Durability for 500 Reconnects Insertion Loss Change	< 0.2 dB
Temperature Stability (-40°C to +75°C) Insertion Loss	< 0.3 dB
Tip Material	Zirconia

9-29.6 Light and Signal Standards

(July 6, 2021 WSDOT GSP, Option 5)

Section 9-29.6 is supplemented with the following:

Traffic Signal Standards

Traffic signal standards shall be furnished and installed in accordance with the methods and materials noted in the applicable Standard Plans, pre-approved plans, or special design plans.

All welds shall comply with the latest AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. Welding inspection shall comply with Section 6-03.3(25)A Welding Inspection.

Hardened washers shall be used with all signal arm connecting bolts instead of lockwashers. All signal arm ASTM F 3125 Grade A325 connecting bolts tightening shall comply with Section 6-03.3(33).

Traffic signal standard types, applicable characteristics, and foundation types are as follows:

Type PPB

Pedestrian push button posts shall conform to Standard Plan J-20.10 or to one of the following pre-approved plans:

Fabricator	Pre-Approved Drawing No.
Valmont Ind., Inc.	DB01165 Rev. B (4 sheets)
Ameron Pole Products Division	WA15TR10-1 Rev. C (1 sheet) and WA15TR10-3 Rev. B (1 sheet)
Millerbernd Manufacturing, Co.	74514-WA-PED-PPB Rev J (2 sheets)

Foundations shall be as noted in Standard Plan J-20.10

Type PS, Type I, Type RM, and Type FB

Type PS pedestrian signal standards, Type I vehicle signal standards, Type RM ramp meter signal standards, and Type FB flashing beacon standards shall conform to Standard Plan J-20.16, J-21.15, J-21.16, and J-22.15 respectively, or to one of the following pre-approved plans:

Fabricator	Pre-Approved Drawing No.
Valmont Ind., Inc.	DB01165 Rev. B (4 sheets)
Ameron Pole Products Division	WA15TR10-1 Rev. C (1 sheet) and WA15TR10-2 Rev. C (1 sheet)
Millerbernd Manufacturing, Co.	74514-WA-PED-FB Rev. H (2 sheets)
Millerbernd Manufacturing Co.	74514-WA-PED-SB Rev. H (2 sheets)

Foundations shall be as noted in Standard Plan J-21.10.

Type II

Type II signal standards are single mast arm signal standards with no luminaire arm or extension. Type II standards shall conform to one of the following pre-approved plans.

Maximum arm length (in feet) and wind load (XYZ value, in cubic feet) is noted for each manufacturer.

Fabricator	Pre-Approved Drawing No.	Max. Arm Length (ft)	Max. Wind Load (XYZ) (ft³)
Valmont Ind., Inc.	DB00162 Rev. B (5 sheets)	65	3206
Ameron Pole Products Division	WA15TR3724-1 Rev. C (sheet 1 of 2), and WA15TR3724-2 Rev. D (sheet 2 of 2)	65	2935
Millerbernd Manufacturing, Co.	74516-WA-TS-II Rev. J (4 sheets)	65	3697

Foundations shall be as noted in the Plans and Standard Plan J-26.10. Type II signal standards with two mast arms installed 90 degrees apart may use these pre-approved drawings. Standards with two arms at any other angle are Type SD and require special design.

Type III

Type III signal standards are single mast arm signal standards with one Type 1 (radial davit type) luminaire arm. The luminaire arm has a maximum length of 16 feet and a mounting height of 30, 35, 40, or 50 feet, as noted in the Plans. Type III standards shall conform to one of the following pre-approved plans. Maximum arm length (in feet) and wind load (XYZ value, in cubic feet) is noted for each manufacturer. Wind load limit includes a luminaire arm up to 16 feet in length.

Fabricator	Pre-Approved Drawing No.	Max. Arm Length (ft)	Max. Wind Load (XYZ) (ft³)
Valmont Ind., Inc.	DB00162 Rev. B (5 sheets), with Type "J" luminaire arm	65	3259
Ameron Pole Products Division	WA15TR3724-1 Rev. C (sheet 1 of 2), and WA15TR3724-2 Rev. D (sheet 2 of 2), with Series "J" luminaire arm	65	2988
Millerbernd Manufacturing, Co.	74516-WA-TS-III Rev. J (5 sheets)	65	3750

Foundations shall be as noted in the Plans and Standard Plan J-26.10. Type III signal standards with two mast arms installed 90 degrees apart may use these pre-approved drawings. Standards with two arms at any other angle are Type SD and require special design.

Type IV

Type IV strain pole standards shall be consistent with the Plans and Standard Plan J-27.15 or one of the following pre-approved plans:

Fabricator	Pre-Approved Drawing No.
Valmont Ind., Inc.	DB01167 Rev. B (2 sheets)
Ameron Pole Products Division	WA15TR15 Rev. A (2 sheets)
Millerbernd Manufacturing, Co.	74554-WA-SP-IV Rev. H (2 sheets)

Foundations shall be as noted in the Plans and Standard Plan J-27.10.

Type V

Type V strain poles are combination strain pole and light standards, with Type 1 (radial davit type) luminaire arms. Luminaire arms may be up to 16 feet in length, and a mounting height of 40 or 50 feet, as noted in the Plans. Type V strain poles shall be consistent with the Plans and Standard Plan J-27.15 or one of the following pre-approved plans:

Fabricator	Pre-Approved Drawing No.
Valmont Ind., Inc.	DB01167 Rev. B (2 sheets),
Ameron Pole Products Division	WA15TR15 Rev. A (2 sheets)
Millerbernd Manufacturing, Co.	74554-WA-SP-V Rev. J (3 sheets)

Foundations shall be as noted in the Plans and Standard Plan J-27.10.

Type CCTV

Type CCTV camera pole standards shall conform to Standard Plan J-29.15 or to one of the following pre-approved plans:

Fabricator	Pre-Approved Drawing No.
Valmont Ind., Inc.	DB01166 Rev. C (4 sheets)
Ameron Pole Products Division	WA15CCTV01 Rev. B (2 sheets)
Millerbernd Manufacturing, Co.	74577-WA-LC1 Rev. H (2 sheets)
Millerbernd Manufacturing, Co.	74577-WA-LC2 Rev. H (2 sheets)
Millerbernd Manufacturing, Co.	74577-WA-LC3 Rev. H (3 sheets)

Foundations shall be as noted in the Plans and Standard Plan J-29.10.

Type SD

Type SD signal standards are outside the basic requirements of any pre-defined signal standard and require special design. All special design shall be based on the latest AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and pre-approved plans and as follows:

1. A 115 mph wind loading shall be used.
2. The Mean Recurrence Interval shall be 1700 years.
3. Fatigue category shall be III.

Complete calculations for structural design, including anchor bolt details, shall be prepared by a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural Engineering or by an individual holding valid registration in another state as a civil or structural Engineer.

All shop drawings and the cover page of all calculation submittals shall carry the Professional Engineer's original signature, date of signature, original seal, registration number, and date of expiration. The cover page shall include the contract number, contract title, and sequential index to calculation page numbers. Two copies of the associated design calculations shall be submitted for approval along with shop drawings.

Details for handholes and luminaire arm connections are available from the Bridges and Structures Office.

Foundations for Type SD standards shall be as noted in the Plans.

9-29.6(4) Welding
(*****)

Section 9-29.6(4) is supplemented with the following:

Welding of steel structures shall be in accordance with Section 5.15 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Sixth Edition-2013.

(*****)

Add the following new subsection:

9-29.6(6) Pedestrian Light Standards **New Section**

Pedestrian light standards shall be round, tapered aluminum with 5-inch base diameter and 3-inch top diameter. Light standards shall meet the following additional criteria:

- Pole height shall be 18 feet.
- Pole shaft shall be constructed from a seamless tube of 6063 aluminum allow per the requirements of ASTM B221 and shall be full-length heat treated after base weld to produce a T6 temper.
- Pole wall thickness shall be 0.156-inches (± 0.004 -inches)
- Pole shall include a 2-inch by 4-inch handhole at 18" off of the ground.
- Pole shall include a hinged cast aluminum base and base cover with tamper-resistant attaching screws.

9-29.10 Luminaires
(*****)

Section 9-29.10 is supplemented with the following:

Pedestrian light fixtures shall be one of the following:

- Kim Lighting WP9S-LED model WP9S-2-P35-60L-3K-120,
- AS1 LED-42C-350-30K-SR2-MVOLT, or
- ITALO 1 0F2H 4.3-3M.

Pedestrian light fixtures shall be side mount.

Fixtures mounted on Type 3 signal standards shall be Kim Lighting WP9L-3-E35-120L-4K-120-LG.

9-29.13 Control Cabinet Assemblies

9-29.13(3) Traffic Signal Controller
(*****)

Section 9-29.13(3) is supplemented with the following:

The traffic signal controller shall be a Cubic/Trafficware Rackmount Commander RC1 ATC.

9-29.13(6) Emergency Preemption
(*****)

Section 9-29.13(6) is supplemented with the following:

The emergency vehicle preemption detectors and indicator lights shall be Opticom brand as provided by the GTT Company. The emergency vehicle detector shall be a Model 721. The emergency vehicle phase selector shall be a Model 764.

The associated confirmation light shall be a 35W flood halogen/Sylvania PAR14 bulb or LED equivalent, which is plugged into the Contractor furnished M575 confirmation light hardware. There shall be one per direction.

The detector lead-in cable shall be Opticom™ brand Model 138 shielded detector cable as provided by GTT Company.

The associated GPS Radio Unit and cable shall be Opticom brand as provided by the GTT Company.

9-29.13(10) NEMA and Type 2070 Controllers and Cabinets

9-29.13(10)D Cabinets for Type 2070 Controllers
(*****)

Section 9-29.13(10)D is supplemented with the following:

The signal controller cabinet shall be a Mobotrex Eagle model 350 ATC cabinet and shall be oriented as shown on the Plans. The cabinet shall include the following:

- 4-door
- 2 x 19" racks
- #2 locks
- ATC Terminal facility with 32 output channels and 24 input channels
- Rack#1:
 - (1) 16-channel Output File #1, wired for 120V AC output
 - (1) 16-channel Output File #2, wired for 120V AC output
 - (1) 16-channel Field Output Panel #1 with flash plugs, (8) pluggable surge suppressors, and (8) flash transfer relays
 - (1) 16-channel Field Output Panel #2 with flash plugs, (8) pluggable surge suppressors, and (8) flash transfer relays
 - (1) 24-channel Input Assembly
 - (1) 24-channel Field Input Panel with (12) pluggable surge suppressors
 - (1) Service Assembly with pluggable surge suppressor/line filter
 - (1) AC Clean Power Bus
 - (1) DC Power/Serial Comm bus
 - (1) Service Panel with AC- and GND bus bars and (12) 1A video circuit breakers
 - (2) Fans/(2) Thermostats (one over each rack)
 - (4) LED light panels for interior illumination. One above each door.

- (1) Pull-out drawer
- Police Panel with Signal On/Off, Auto/Flash, and Auto/Manual switches, pluggable manual control cable
- Rack #2:
 - Special 19" rack with 2nd set of rails
 - (1) Pull-out drawer
 - (1) Duplex receptacle
 - (1) 12-receptacle power strip
- Plugins:
 - (18) EDI Model 2202-HV HDSP/FU Load switch/Flasher
 - (1) EDI Model CMU2212ip-HV conflict monitor
 - (1) EDI Model 2220 ADU Auxiliary Display Unit
 - (4) EDI Model 2218 SIU
 - (1) EDI Model PS-2216-HV Cabinet Power Supply

(*****)

Add the following new subsection:

9-29.13(13) Uninterrupted Power Supply (UPS)

New Section

The uninterrupted power supply shall be as follows from the following manufacturer or approved equal:

- 1) UTAS
- 2) RBMS (4 Battery System)
- 3) FXM1100, w/6 relays, 120v I/O, IP/SNMP
- 4) Battery Cable Harness Kit
- 5) 240XTV Batteries (4)
- 6) Battery Heater Mat (2)
- 7) Rack Mount Kit for FXM1100

Manufacturer:

Western Systems
 1122 Industry Street, Building B
 Everett, WA 98203
<https://www.westernsystems-inc.com/>

provided by the pushbutton manufacturer. Cable may be standard four conductor cable meeting the requirements of Standard Specification 9-29.3(2)B if it meets the pushbutton manufacturers requirements.

The following shall be provided at each intersection:

1. One USB flash drive with copies of all voice message audio files for that intersection, placed in the traffic signal cabinet drawer or drawing envelope. A separate flash drive is required for each intersection.
2. One USB cable of the appropriate type (A to A, A to B, male/female, etc.), placed in the traffic signal cabinet drawer or drawing envelope.

Any other equipment or software required by the manufacturer for setup, operation, and maintenance of the pushbutton stations shall be provided.

Dual button adaptor brackets are required for all installations with two APS pushbuttons on the same Type PPB, Type PS, or Type I Signal Standard. Where dual button adaptor brackets or extension brackets are required, they shall be obtained from the same manufacturer as the pushbutton station. Brackets and extensions from other manufacturers shall not be used.

APS Speech Messages

Speech messages shall be provided in the following format:

- “Wait.”
- “Wait to cross ____ (A) ____ at ____ (B) ____.”
- “Walk sign is on to cross ____ (A) ____.”

The following table lists the entries for (A) and (B) above, as well as quantities for button and arrow orientations:

Street (A)	Street (B)	Arrow Direction	QTY
200th St SW	Cedar Valley Rd	L	1
200th St SW	Cedar Valley Rd	R	1
200th St SW	50th Ave W	L	1
200th St SW	50th Ave W	R	1
Cedar Valley Rd	200 th St SW	L	1
Cedar Valley Rd	200 th St SW	R	1
50 th Ave W	200 th St SW	L	1
50 th Ave W	200 th St SW	R	1

Order forms shall be completed by the Contractor using the information presented above.

9-29.21 Flashing Beacon

9-29.21(1) Conventional Flashing Beacons
(*****)

Section 9-29.21(1) is supplemented with the following:

The flashing beacon system shall be a Carmanah R820-F with dual horizontal back-to-back lights, Campbell Guardian audible pushbutton kit, and solar panel (round pole mount) installed at the top of the pole. All housing and PPB shall be black.

Signs, pushbutton, beacon, solar panel, and any other associated equipment shall be mounted on a 4-inch SCH 80 aluminum pipe with a square, aluminum pedestal base.

Pedestal base shall be threaded for 4-inch pipe and include a set bolt for securing the pipe. Pedestal shall include an 8-inch by 8.5-inch access door, which shall be oriented towards the sidewalk. Pedestal base shall be secured to foundation with four anchor bolts (1-inch to 1.5-inch bolt circle).

9-29.24 Service Cabinets
(*****)

Section 9-29.24 is supplemented with the following:

The service cabinet shall be Tesco "Lynnwood" model 28-105 or approved equal, and include but not be limited to the following specifications:

- 120/240 Volts
- 1 Phase
- 3 Wire
- 100 Amp main breaker
- 60 Hz
- Dimensions to match the foundation size as shown on the Plans.
- 3 x 30 Amp Lighting Circuits
- Interior meter
- Spare signal circuit
- Photocell
- GFI receptacle

APPENDICES

(January 2, 2012 WSDOT GSP)

The following appendices are attached and made a part of this contract:

*** APPENDIX A:
Geotechnical Report

APPENDIX B:

Permits (both obtained and applied for):

- City Critical Area Permit
- City Grading Permit
- City Building Permit
- City Clearing Permit
- Temporary Construction Easement
- SEPA Permit Approval
- NEPA Permit Approval
- Hydraulic Project Permit Approval
- JARPA Permit Approval
- DOE Construction Stormwater General Permit (CSWGP)
- City Hydrant Use
- City Limited Discharge (Sanitary Sewer System)
- City of Lynnwood Saturday Work Permit/Noise Permit
- City of Lynnwood Weekend, after hours permit
- County Right of Way Permit

(September 13, 2021 WSDOT GSP)

STANDARD PLANS

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01, effective September 13, 2021, is made a part of this contract.

The Standard Plans are revised as follows:

B-90.40

Valve Detail – DELETED

C-8

DELETED

C-8A

DELETED

C-60.10

Sheet 1, ADD Note: NOTE: STEEL WELDED WIRE REINFORCEMENT DEFORMED FOR CONCRETE MAY BE SUBSTITUTED FOR REINFORCING STEEL IN ACCORDANCE WITH STANDARD SPECIFICATION, SECTION 6-10.3

Sheet 2, New Note 5: The connecting pin may be fabricated with a forged head as shown on Standard Plan C-60.15.”

C-85.16

DELETED

C-85.20

DELETED

D-10.10

Wall Type 1 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT Bridge Design Manual (BDM) and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.15

Wall Type 2 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.30

Wall Type 5 may be used in all cases.

D-10.35

Wall Type 6 may be used in all cases.

D-10.40

Wall Type 7 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.45

Wall Type 8 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the revisions stated in the 11/3/15 Bridge Design memorandum.

D-15.10

STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.20

STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.30

STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

G-90.11

DELETED

G-90.40

DELETED

J-20.26

Add Note 1, "1. One accessible pedestrian pushbutton station per pedestrian pushbutton post."

J-20.16

View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10

Sheet 1, Elevation View, Round Concrete Foundation Detail, callout – "ANCHOR BOLTS ~ 3/4" (IN) x 30" (IN) FULL THREAD ~ THREE REQ'D. PER ASSEMBLY" IS REVISED TO READ: "ANCHOR BOLTS ~ 3/4" (IN) x 30" (IN) FULL THREAD ~ FOUR REQ'D. PER ASSEMBLY"

Sheet 1 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3" CLR.. Delete "(TYP.)" from the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.

Sheet 1 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.

Sheet 2 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.

Sheet 2 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.

Detail F, callout, "Heavy Hex Clamping Bolt (TYP.) ~ 3/4" (IN) Diam. Torque Clamping Bolts (see Note 3)" is revised to read; "Heavy Hex Clamping Bolt (TYP.) ~ 3/4" (IN) Diam. Torque Clamping Bolts (see Note 1)"

Detail F, callout, "3/4" (IN) x 2' – 6" Anchor Bolt (TYP.) ~ Four Required (See Note 4)" is revised to read; "3/4" (IN) x 2' – 6" Anchor Bolt (TYP.) ~ Three Required (See Note 2)"

J-21.15

Partial View, callout, was – LOCK NIPPLE ~ 1 1/2" DIAM., is revised to read; CHASE NIPPLE ~ 1 1/2" (IN) DIAM.

J-21.16

Detail A, callout, was – LOCKNIPPLE, is revised to read; CHASE NIPPLE

J-22.15

Ramp Meter Signal Standard, elevation, dimension 4' - 6" is revised to read; 6'-0"
(2x) Detail A, callout, was – LOCK NIPPLE ~ 1 1/2" DIAM. is revised to read; CHASE NIPPLE ~ 1 1/2" (IN) DIAM.

J-40.10

Sheet 2 of 2, Detail F, callout, "12 – 13 x 1 ½" S.S. PENTA HEAD BOLT AND 12" S. S. FLAT WASHER" is revised to read; "12 – 13 x 1 ½" S.S. PENTA HEAD BOLT AND 1/2" (IN) S. S. FLAT WASHER"

J-40.36

Note 1, second sentence; "Finish shall be # 2B for backbox and # 4 for the cover." Is revised to read; "Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-40.37

Note 1, second sentence; "Finish shall be # 2B for backbox and # 4 for the cover." Is revised to read; "Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-75.20

Key Notes, note 16, second bullet point, was: "1/2" (IN) x 0.45" (IN) Stainless Steel Bands", add the following to the end of the note: "Alternate: Stainless steel cable with stainless steel ends, nuts, bolts, and washers may be used in place of stainless steel bands and associated hardware."

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

A-10.10-00.....8/7/07	A-30.35-00.....10/12/07	A-50.10-01.....8/17/21
A-10.20-00.....10/5/07	A-40.00-00.....8/11/09	A-50.40-01.....8/17/21
A-10.30-00.....10/5/07	A-40.10-04.....7/31/19	A-60.10-03.....12/23/14
A-20.10-00.....8/31/07	A-40.15-00.....8/11/09	A-60.20-03.....12/23/14
A-30.10-00.....11/8/07	A-40.20-04.....1/18/17	A-60.30-01.....6/28/18
A-30.30-01.....6/16/11	A-40.50-02.....12/23/14	A-60.40-00.....8/31/07
B-5.20-03.....9/9/20	B-30.50-03.....2/27/18	B-75.20-03.....8/17/21
B-5.40-02.....1/26/17	B-30.60-00.....9/9/20	B-75.50-01.....6/10/08
B-5.60-02.....1/26/17	B-30.70-04.....2/27/18	B-75.60-00.....6/8/06
B-10.20-02.....3/2/18	B-30.80-01.....2/27/18	B-80.20-00.....6/8/06
B-10.40-02.....8/17/21	B-30.90-02.....1/26/17	B-80.40-00.....6/1/06
B-10.70-02.....8/17/21	B-35.20-00.....6/8/06	B-85.10-01.....6/10/08
B-15.20-01.....2/7/12	B-35.40-00.....6/8/06	B-85.20-00.....6/1/06
B-15.40-01.....2/7/12	B-40.20-00.....6/1/06	B-85.30-00.....6/1/06
B-15.60-02.....1/26/17	B-40.40-02.....1/26/17	B-85.40-00.....6/8/06
B-20.20-02.....3/16/12	B-45.20-01.....7/11/17	B-85.50-01.....6/10/08
B-20.40-04.....2/27/18	B-45.40-01.....7/21/17	B-90.10-00.....6/8/06
B-20.60-03.....3/15/12	B-50.20-00.....6/1/06	B-90.20-00.....6/8/06
B-25.20-02.....2/27/18	B-55.20-03.....8/17/21	B-90.30-00.....6/8/06
B-25.60-02.....2/27/18	B-60.20-02.....9/9/20	B-90.40-01.....1/26/17
B-30.05-00.....9/9/20	B-60.40-01.....2/27/18	B-90.50-00.....6/8/06
B-30.10-03.....2/27/18	B-65.20-01.....4/26/12	B-95.20-02.....8/17/21
B-30.15-00.....2/27/18	B-65.40-00.....6/1/06	B-95.40-01.....6/28/18

B-30.20-04.....2/27/18
B-30.30-03.....2/27/18
B-30.40-03.....2/27/18

B-70.20-00.....6/1/06
B-70.60-01.....1/26/17

C-1.....9/9/20
C-1b.....9/9/20
C-1d.....10/31/03
C-2c.....8/12/19
C-4f.....8/12/19

C-22.16-07.....9/16/20
C-22.40-08.....9/16/20
C-22.45-05.....9/16/20
C-23.60-04.....7/21/17
C.24.10-02.....8/12/19
C-25.20-07.....8/20/21

C-60.70-00.....9/24/20
C-60.80-00.....8/17/21
C-70.15-00.....8/17/21
C-70.10-03.....8/20/21
C-75.10-02.....9/16/20
C-75.20-03.....8/20/21

C-6a.....10/14/09
C-7.....6/16/11
C-7a.....6/16/11
C-8.....2/10/09
C-8a.....7/25/97
C-20.10-07.....8/20/21
C-20.14-04.....8/12/19
C-20.15-02.....6/11/14
C-20.18-03.....8/12/19
C-20.40-08.....8/20/21
C-20.41-03.....8/20/21
C-20.42-05.....7/14/15
C-20.45.02.....8/12/19

C-25.22-06.....8/20/21
C-25.26-05.....8/20/21
C-25.30-01.....8/20/21
C-25.80-05.....8/12/19
C-60.10-01.....9/24/20
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C-60.40-00.....8/17/21
C-60.45-00.....8/17/21
C-60.50-00.....8/17/21
C-60.60-00.....8/17/21

C-75.30-03.....8/20/21
C-80.10-02.....9/16/20
C-80.20-01.....6/11/14
C-80.30-02.....8/20/21
C-80.40-01.....6/11/14
C-85.10-00.....4/8/12
C-85.11-01.....9/16/20
C-85.15-02.....8/27/21
C-85-18-02.....8/20/21

D-2.04-00.....11/10/05
D-2.06-01.....1/6/09
D-2.08-00.....11/10/05
D-2.32-00.....11/10/05
D-2.34-01.....1/6/09
D-2.36-03.....6/11/14
D-2.46-02.....8/13/21
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D-2.68-00.....11/10/05

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D-3.17-02.....5/9/16
D-4.....12/11/98
D-6.....6/19/98

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D-10.45-01.....12/2/08

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E-2.....5/29/98

E-4.....8/27/03
E-4a.....8/27/03

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J-60.05-01.....7/21/16
J-60.11-00.....5/20/13
J-60.12-00.....5/20/13

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L-40.15-01.....6/16/11
L-40.20-02.....6/21/12

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M-9.60-00.....2/10/09

M-11.10-03.....8/7/19
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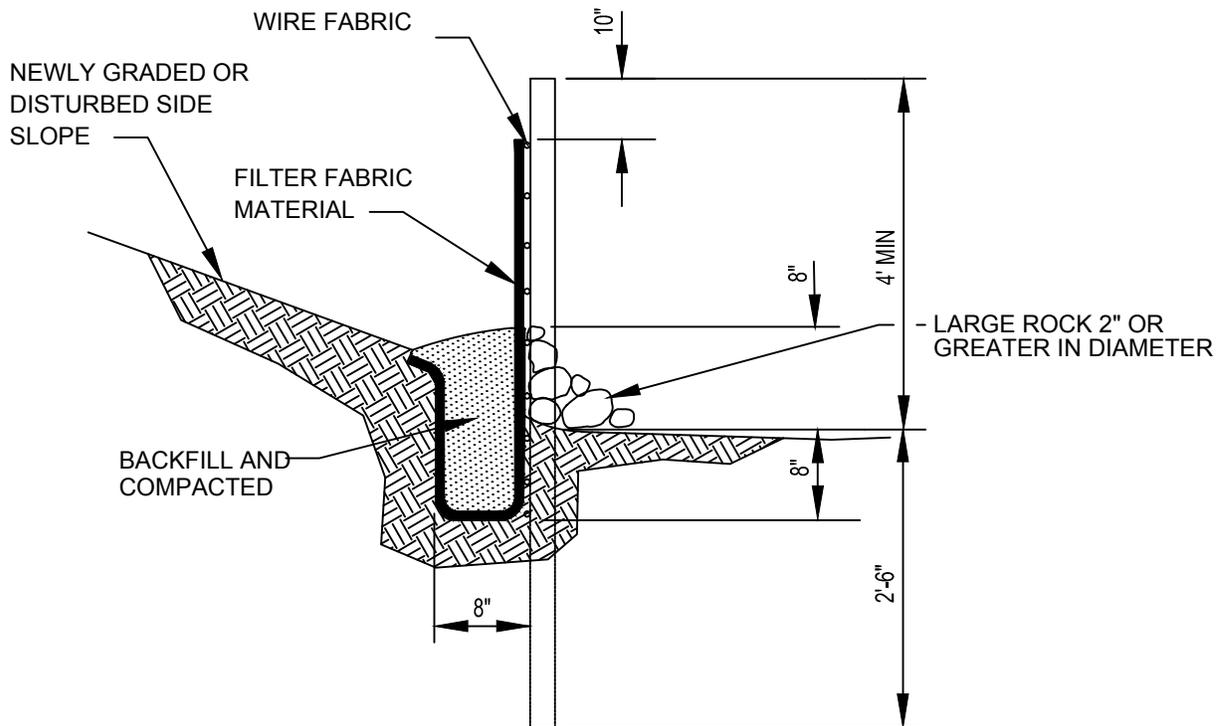
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END OF DIVISION 9

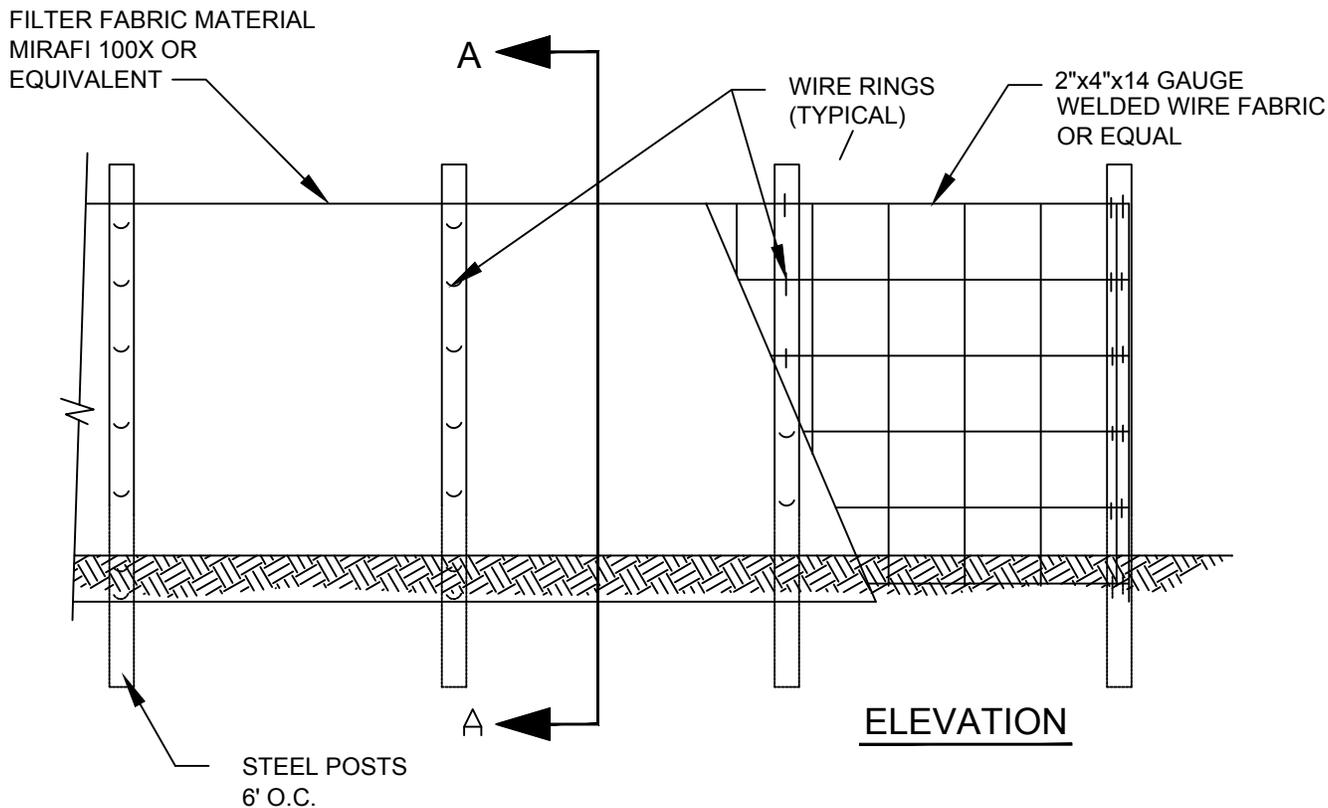
SECTION 9
CONTRACT PLANS

(UNDER SEPARATE COVER)

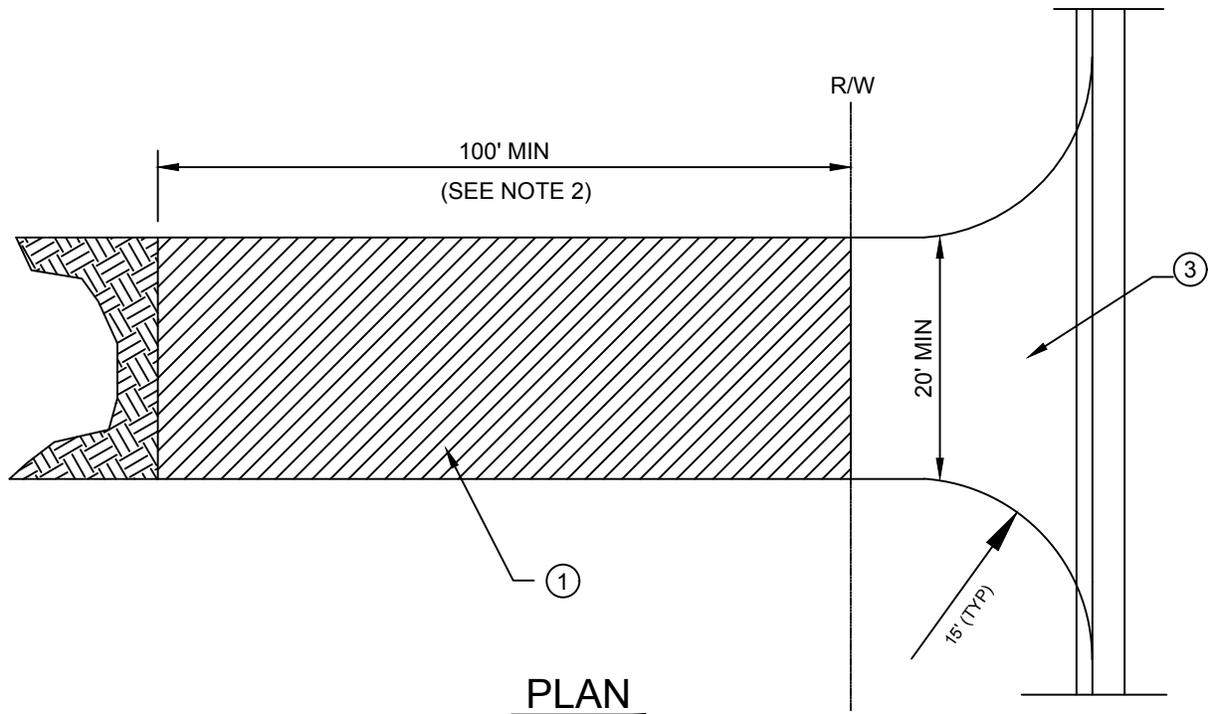
SECTION 10
STANDARD PLANS



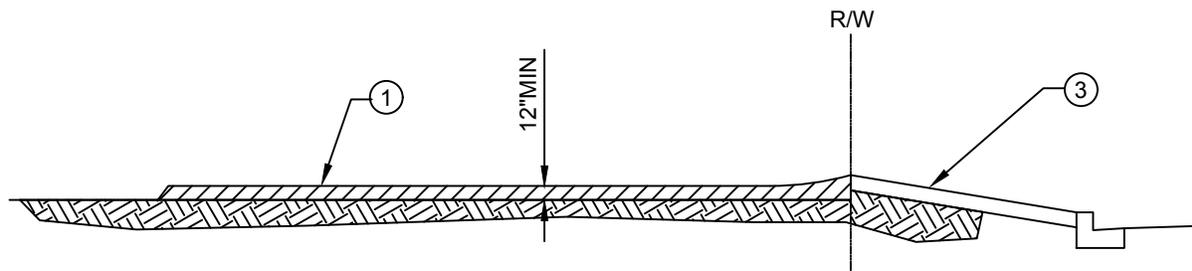
SECTION A-A



DRAWING NUMBER	STD2-5
SCALE	NONE
REVISION DATE	11/05
DEPARTMENT	PW



PLAN



SECTION

NOTES:

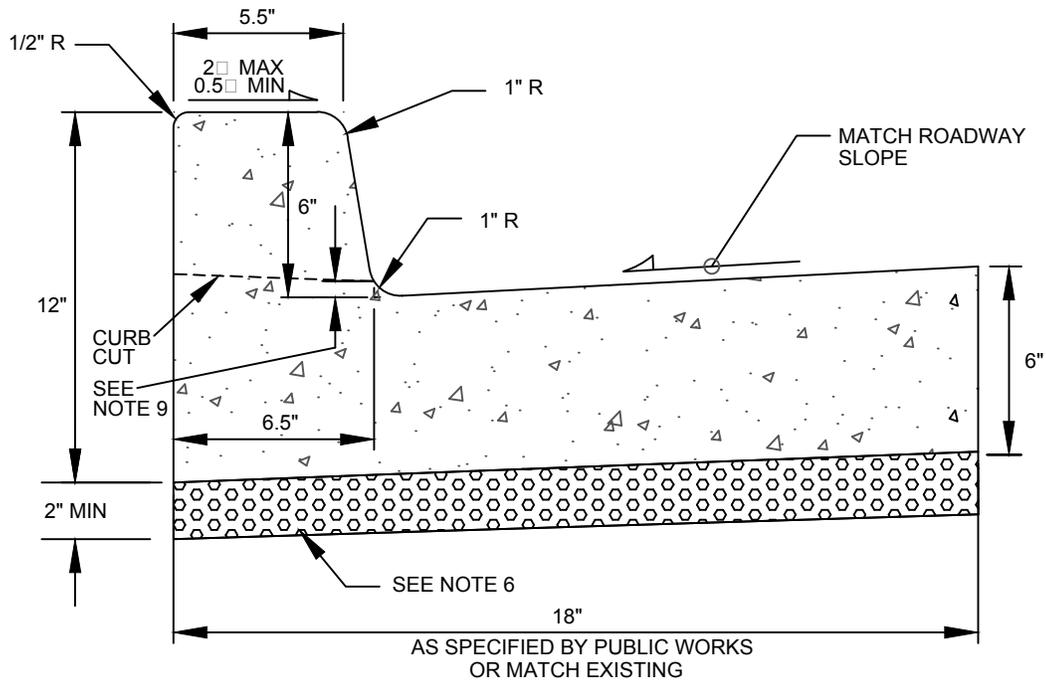
- ① QUARRY SPALLS 4" - 8"
- ② SEE FIGURE 4.2 IN THE CURRENT ADOPTED STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGT DETAILS. NOTE: THE MINIMUM 100LF OF ENTRANCE SHALL BE REDUCED TO THE MAXIMUM PRACTICABLE SIZE WHEN THEN SIZE OR CONFIGURATION OF THE SITE DOES NOT ALLOW THE FULL LENGTH (100LF).
- ③ EXISTING DRIVEWAY RAMP, OR SITE ACCESS ROAD 20' WIDE MIN. MATERIAL MUST BE EQUAL TO OR BETTER THAN SPECIFIED IN NOTE 1.
- ④ A SEPARATION GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENT FROM PUMPING UP INTO THE ROCK PAD. THE GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS:
 GRAB TENSILE STRENGTH (ASTM D4751) 200 PSI MIN.
 GRAB TENSILE ELONGATION (ASTM D4632) 30% MAX.
 MULLEN BURST STRENGTH (ASTM D3786-80A) 400 PSI MIN.
 AOS (ASTM D4751) 20-45 (U.S. STANDARD SIEVE SIZE)



TEMPORARY CONSTRUCTION
ENTRANCE

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DRAWING NUMBER	STD2-9
SCALE	NONE
REVISION DATE	03/17
DEPARTMENT	PW



TYPICAL SECTION

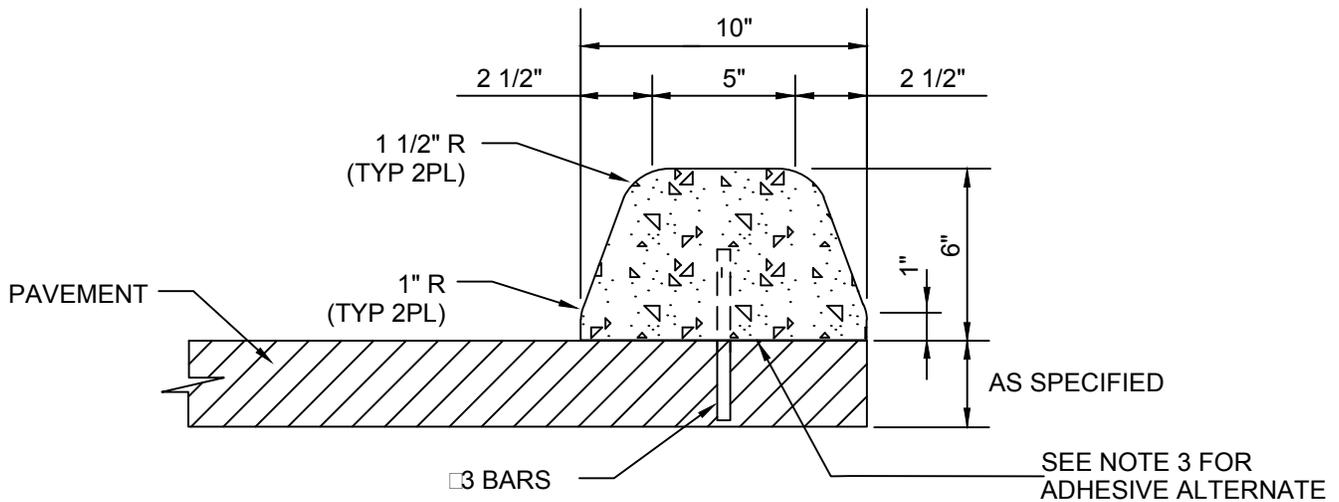
NOTES

1. FINISHING, CURING, FORM WORK, PLACEMENT AND MATERIALS SHALL CONFORM TO WSDOT SPECS.
2. EXPANSION JOINTS SHALL BE PLACED ON 10 FOOT CENTERS.
3. EXPANSION JOINTS SHALL BE PLACED ADJACENT TO CATCH BASINS, INLETS AND AT POINTS OF TANGENCY ON STREETS, ALLEYS, AND DRIVEWAY RETURNS.
4. ALL JOINTS SHALL BE CLEAN AND EDGED.
5. FINISH SHALL BE LIGHT BROOM FINISH.
6. ALL CURB AND GUTTER SHALL BE PLACED ON A MIN. OF 2" OF CRUSHED SURFACING TOP COURSE COMPACTED AS SPECIFIED IN WSDOT STANDARDS AND SPECS.
7. FULL EXPANSION JOINT BETWEEN CURB AND GUTTER AND THE SIDEWALK.
8. SEE 4-10 OPEN CURB FACE FRAME □ GRATE INSTALLATION FOR 4' OF THICKENED CURB AT CATCH BASIN.
9. 1/4" MAX LIP IN DRIVEWAY CUTS
NO LIP (FLUSH) IN CURB RAMP CUTS.

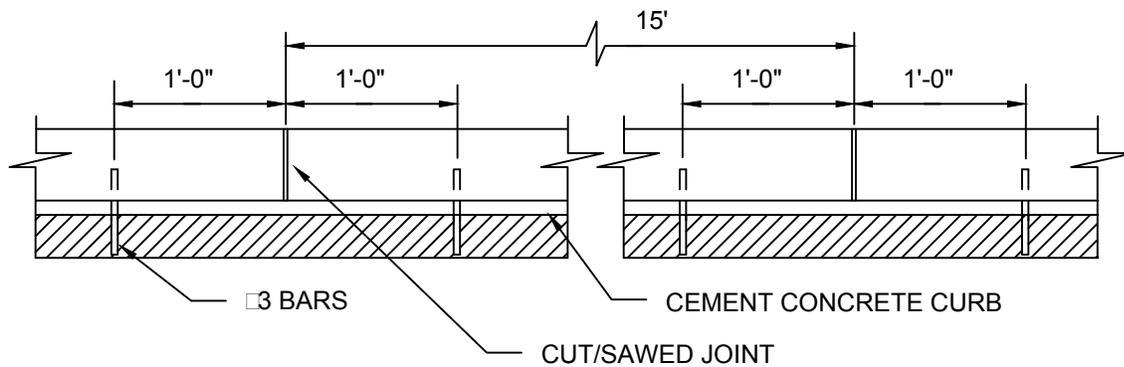


CONCRETE CURB AND GUTTER

DRAWING NUMBER	STD3-6
SCALE	NONE
REVISION DATE	01/17
DEPARTMENT	PW



EXTRUDED CEMENT CONCRETE CURB

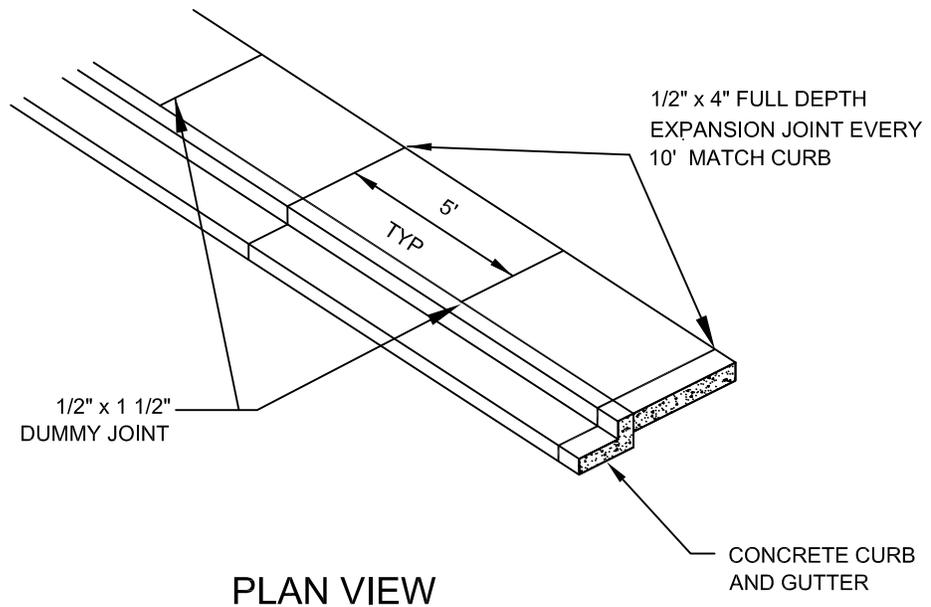


SPACING OF ANCHOR BARS

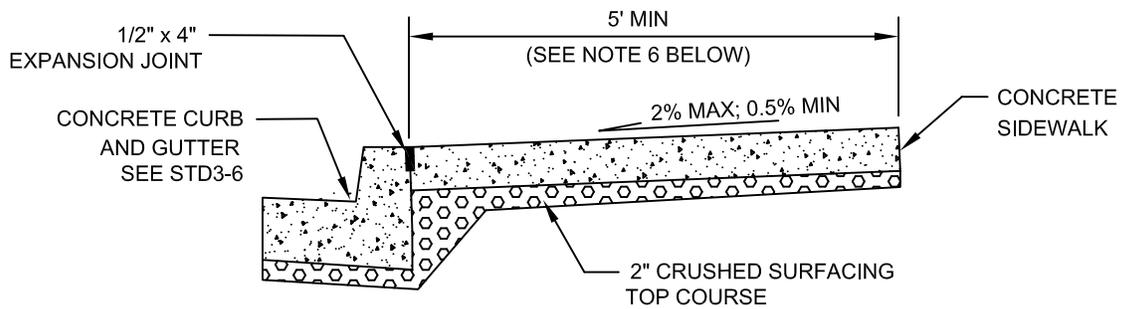
NOTES:

1. DUMMY JOINTS SHALL BE PLACED NOT TO EXCEED 15'CLS. THRU JOINTS SHALL BE PLACED ONLY AT POINTS OF TANGENCY ON STREET ALLEY AND DRIVEWAY RETURNS AND WHERE THRU JOINTS OCCUR IN THE PAVEMENT SLAB.
2. CONCRETE SHALL BE CLASS 3000 OR COMMERCIAL WITH AIR-ENTRAPMENT.
3. AT THE CONTRACTOR'S OPTION CONCRETE CURBS MAY BE ANCHORED TO THE EXISTING PAVEMENT EITHER BY PLACING STEEL TIE BARS 1 FOOT ON EACH SIDE OF EVERY JOINT, OR BY USING AN ADHESIVE. THE ADHESIVE SHALL MEET THE REQUIREMENTS OF SECTION 9-26 OF THE WSDOT/APWA STANDARD SPECIFICATIONS FOR TYPE II EPOXY RESIN.

DRAWING NUMBER	STD3-9
SCALE	NONE
REVISION DATE	11/01
DEPARTMENT	PW



PLAN VIEW



TYPICAL SECTION

NOTES

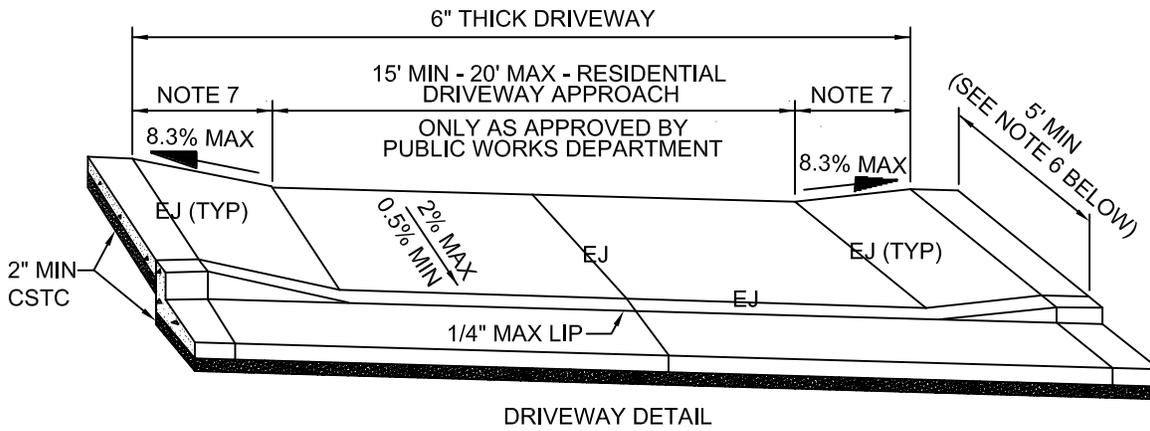
1. SIDEWALKS SHALL BE 4" THICK IN NON-TRAFFIC AREAS, 6" THICK IN TRAFFIC AREAS, AND SHALL BE 3000 PSI CONCRETE, WITH AIR ENTRAINMENT (MIN 4.5 %, MAX 7.5 %).
2. FULL DEPTH EXPANSION JOINTS SHALL GENERALLY BE PLACED TO MATCH THOSE PLACED IN ADJACENT CURB & GUTTER, WITH MAXIMUM SPACING OF 10 FEET. DUMMY JOINTS SHALL BE PLACED EVERY 5 FEET. FINAL SPACING DETERMINATION SHALL BE DECIDED BY THE INSPECTOR IN THE FIELD.
3. SUBGRADE SHALL BE COMPACTED AS SPECIFIED IN WSDOT STANDARDS AND SPECIFICATIONS.
4. THE FINISHED SIDEWALK SHALL BE COVERED BY CURING COMPOUND, WATERPROOF PAPER OR PLASTIC SHEETING IN THE EVENT OF RAIN OR OTHER INCLEMENT WEATHER. CURING TIME SHALL BE AS SPECIFIED BY WSDOT 6-02.3 (11).
5. ALL JOINTS SHALL BE CLEANED AND EDGED WITH AN EDGER HAVING A 1/4" RADIUS.
6. SIDEWALKS ARE TYPICALLY 5' WIDE, EXCEPT 7' IN SOME COMMERCIAL AREAS, OR AS APPROVED BY THE PUBLIC WORKS DIRECTOR. SIDEWALKS ARE WIDER THAN 7' IN CERTAIN ZONES (E.G. CITY CENTER)



CONCRETE SIDEWALK

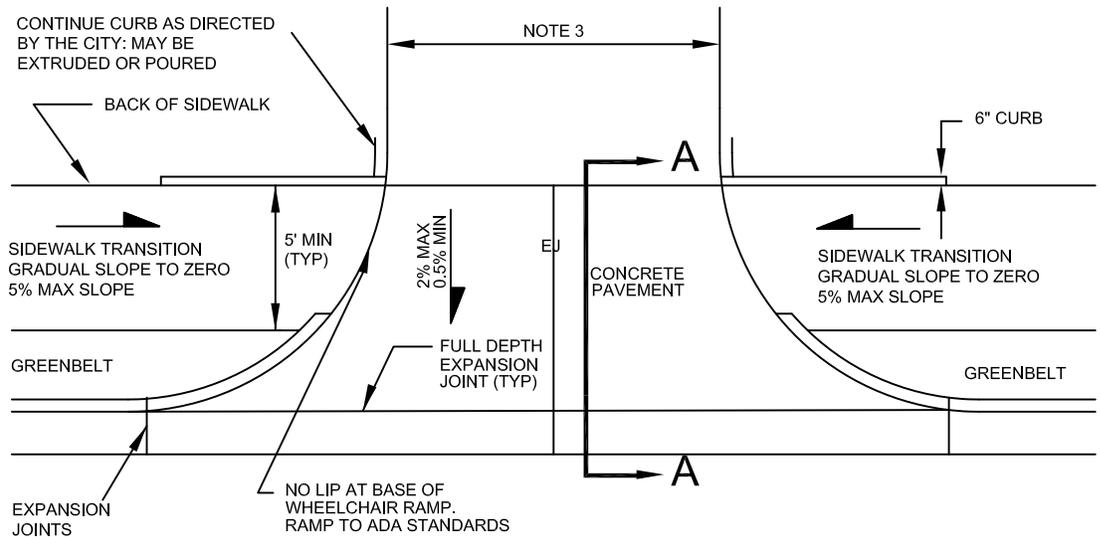
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DRAWING NUMBER	STD3-10
SCALE	NONE
REVISION DATE	04/14
DEPARTMENT	PW

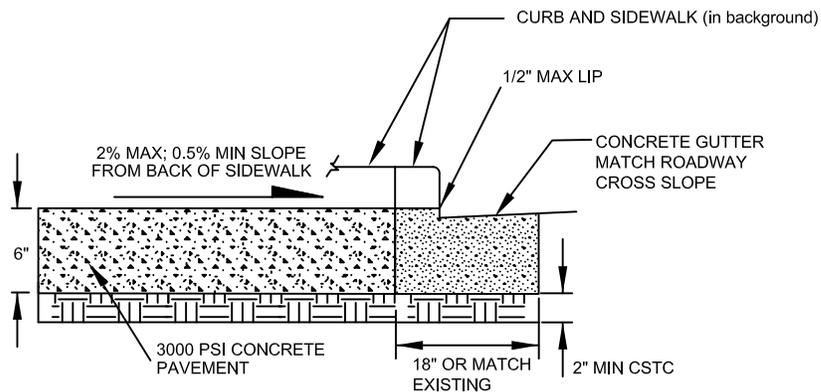


NOTES

1. SIDEWALKS SHALL BE A MINIMUM OF 4" THICK, AND DRIVEWAY APRON SHALL BE A MINIMUM OR 6" THICK, AND SHALL BE 3000PSI CONCRETE, WITH AIR ENTRAINMENT (MIN 4.5 %, MAX 7.5 %).
2. FULL EXPANSION JOINTS SHALL GENERALLY BE PLACED TO MATCH THOSE PLACED IN ADJACENT CURB & GUTTER, WITH MAXIMUM SPACING OF 10 FEET. DUMMY JOINTS EVERY 5 FEET. FINAL SPACING DETERMINATION SHALL BE DECIDED BY THE INSPECTOR IN THE FIELD.
3. SUB GRADE SHALL BE COMPACTED AS SPECIFIED IN WSDOT STANDARD AND SPECIFICATIONS.
4. THE FINISHED SIDEWALK SHALL BE COVERED BY CURING COMPOUND, WATERPROOF PAPER OR PLASTIC SHEETING IN THE EVENT OF RAIN OR OTHER INCLEMENT WEATHER. CURING TIME SHALL BE AS SPECIFIED BY WSDOT 6-02.3 (11).
5. ALL JOINTS SHALL BE CLEANED AND EDGED WITH AN EDGER HAVING A 1/4" RADIUS.
6. SIDEWALKS ARE TYPICALLY 5' WIDE, EXCEPT 7' IN COMMERCIAL AREAS, OR AS APPROVED BY THE PUBLIC WORKS DIRECTOR.
7. RAMP LENGTH VARIES (WITH A MINIMUM OF 6') AND SHALL BE CALCULATED BASED ON A RAMP SLOPE (PARALLEL TO THE CURB) WHICH DOES NOT EXCEED 8.3%. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
8. EJ = FULL LENGTH EXPANSION JOINT; 10' MAXIMUM SPACING BETWEEN JOINTS



PLAN



SECTION A-A

NOTES

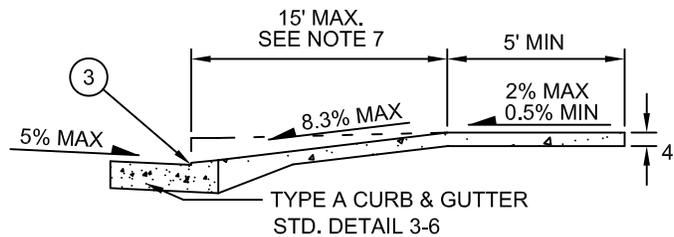
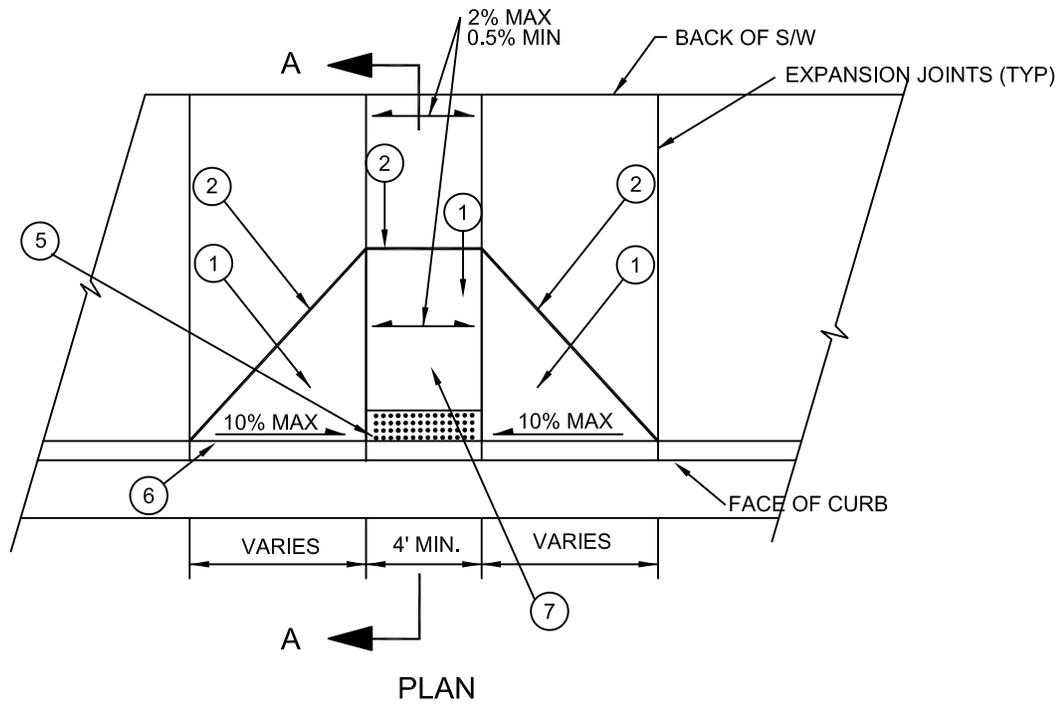
1. RAMP TEXTURING SHALL BE A BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL.
2. RAMP LENGTH VARIES (WITH A MINIMUM OF 6') AND SHALL BE CALCULATED BASED ON A RAMP SLOPE (PARALLEL TO THE CURB) WHICH DOES NOT EXCEED 8.3%. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
3. 24' MINIMUM TO 30' MAXIMUM, OR AS APPROVED BY THE CITY.



COMMERCIAL AT-GRADE DRIVEWAY WITH GREENBELT, NO RAMPS

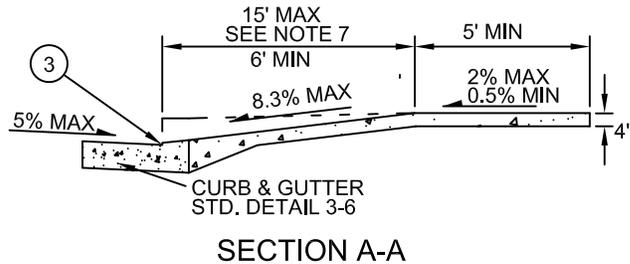
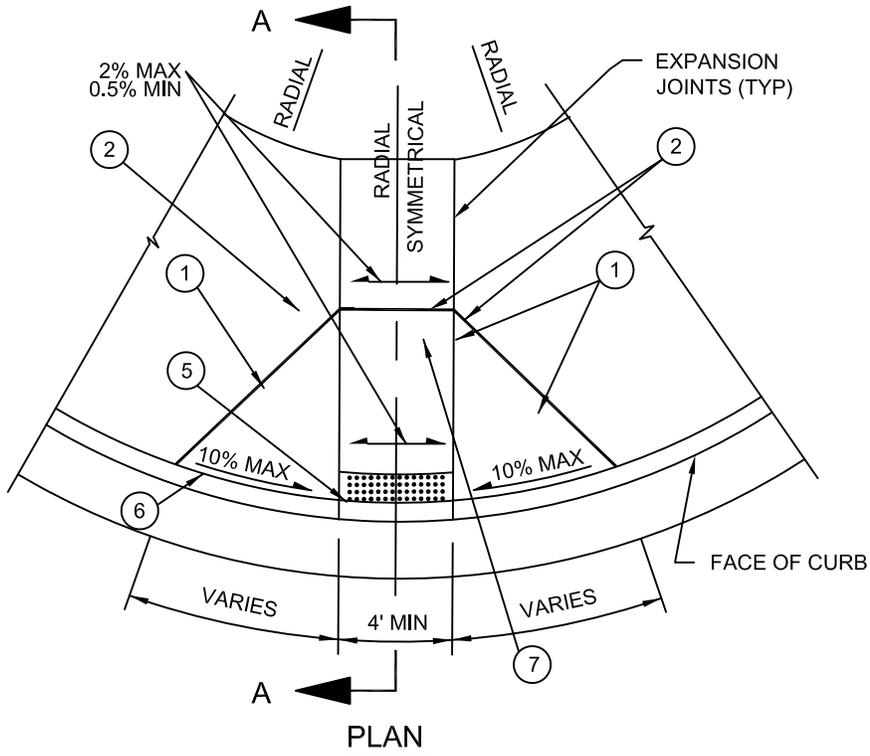
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DRAWING NUMBER	STD3-12D
SCALE	NONE
REVISION DATE	12/18
DEPARTMENT	PW



NOTES

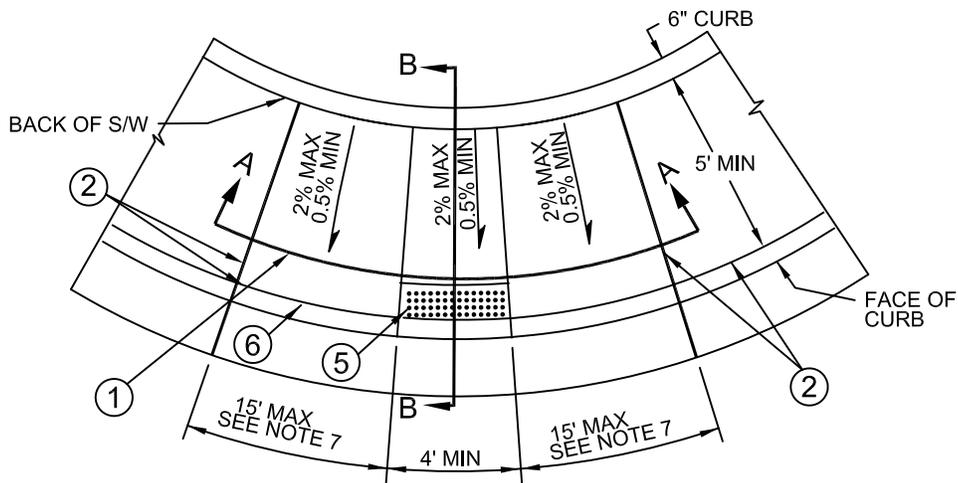
- ① RAMP TEXTURING SHALL BE A BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL
- ② 1/2" DEPTH EXPANSION JOINT.
- ③ NO LIP AT GUTTER LINE
- ④ CURB RAMPS WILL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES.
- ⑤ TRUNCATED DOME PER ADA STANDARDS. TRUNCATED DOMES SHALL BE NON-CONCRETE, POLYMER, COMPOSITE, CAST IN PLACE UNITS COMPLIANT WITH ADA STANDARDS. COLOR SHALL BE UNIFORMLY INTEGRAL THROUGHOUT THE CROSS SECTION AND CONTRASTING COLOR WITH ADJACENT WALKWAY SURFACES PER ADA STANDARDS. SUBMIT SAMPLE TO CITY FOR APPROVAL PRIOR TO INSTALLATION.
- ⑥ POUR CURB SEPARATE FROM SIDEWALK POUR WITH FULL DEPTH EXPANSION AT BACK OF CURB.
- ⑦ RAMP LENGTH VARIES (WITH A MINIMUM OF 6') AND SHALL BE CALCULATED BASED ON A RAMP SLOPE WHICH DOES NOT EXCEED 8.3%.



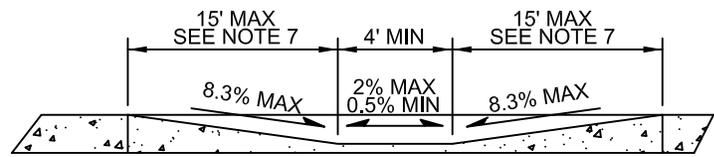
NOTES

- ① RAMP TEXTURING SHALL BE A BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL
- ② 1/2" DEPTH EXPANSION JOINT.
- ③ NO LIP AT GUTTER LINE.
- ④ CURB RAMPS WILL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES.
- ⑤ TRUNCATED DOME PER ADA STANDARDS. TRUNCATED DOMES SHALL BE NON-CONCRETE, POLYMER, COMPOSITE, CAST IN PLACE UNITS COMPLIANT WITH ADA STANDARDS. COLOR SHALL BE UNIFORMLY INTEGRAL THROUGHOUT THE CROSS SECTION AND CONTRASTING COLOR WITH ADJACENT WALKWAY SURFACES PER ADA ADA STANDARDS. SUBMIT SAMPLE TO CITY FOR APPROVAL PRIOR TO INSTALLATION.
- ⑥ POUR CURB SEPARATE FROM SIDEWALK POUR WITH FULL DEPTH EXPANSION JOINT AT BACK OF CURB.
- ⑦ RAMP LENGTH VARIES (WITH A MINIMUM OF 6') AND SHALL BE CALCULATED BASED ON A RAMP SLOPE WHICH DOES NOT EXCEED 8.3%.

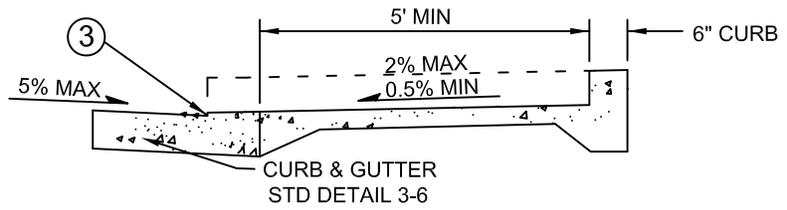
DRAWING NUMBER	STD3-14
SCALE	NONE
REVISION DATE	03/14
DEPARTMENT	PW



PLAN



SECTION A-A



SECTION B-B

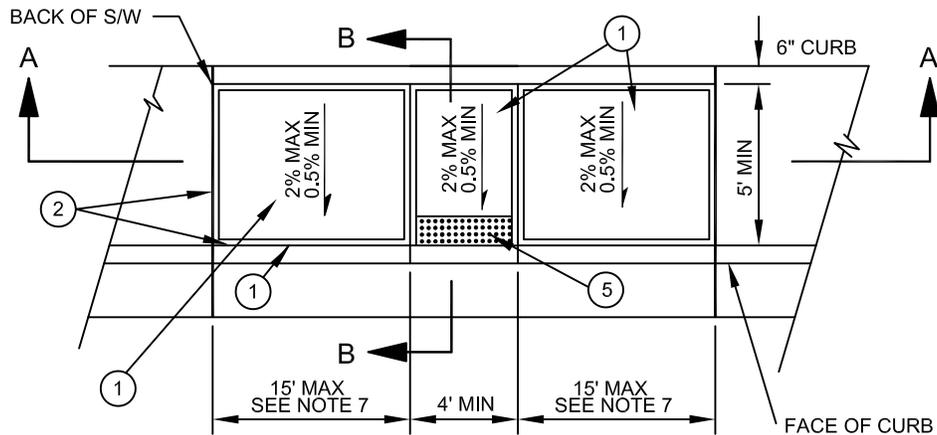
NOTES

- ① RAMP TEXTURING SHALL BE A BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL
- ② FULL DEPTH EXPANSION JOINT.
- ③ NO LIP AT GUTTER LINE.
- ④ CURB RAMPS WILL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES.
- ⑤ TRUNCATED DOME PER ADA STANDARDS. TRUNCATED DOMES SHALL BE NON-CONCRETE, POLYMER, COMPOSITE, CAST IN PLACE UNITS COMPLIANT WITH ADA STANDARDS. COLOR SHALL BE UNIFORMLY INTEGRAL THROUGHOUT THE CROSS SECTION AND CONTRASTING COLOR WITH ADJACENT WALKWAY SURFACES PER ADA STANDARDS. SUBMIT SAMPLE TO CITY FOR APPROVAL PRIOR TO INSTALLATION.
- ⑥ POUR CURB SEPARATE FROM SIDEWALK POUR.
- ⑦ RAMP LENGTH VARIES WITH A MINIMUM OF 6' AND SHALL BE CALCULATED BASED ON A RAMP SLOPE WHICH DOES NOT EXCEED 8.3%. THE CURB RAMP MAX SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.

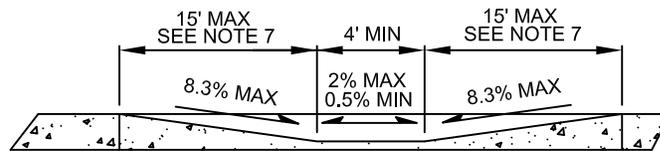


TYPE D CURB RAMP

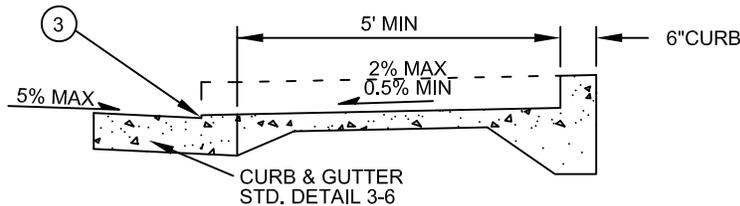
DRAWING NUMBER	STD3-15A
SCALE	NONE
REVISION DATE	03/14
DEPARTMENT	PW



PLAN



SECTION A-A

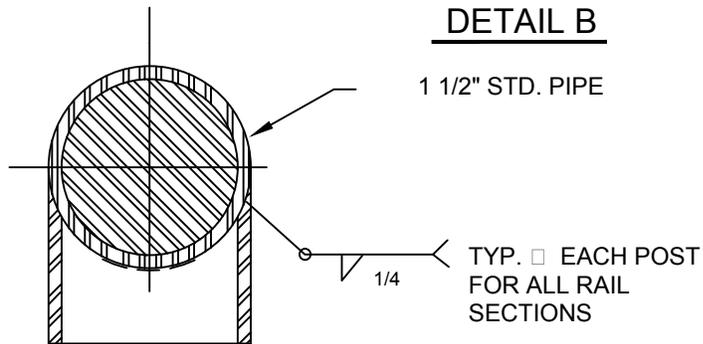
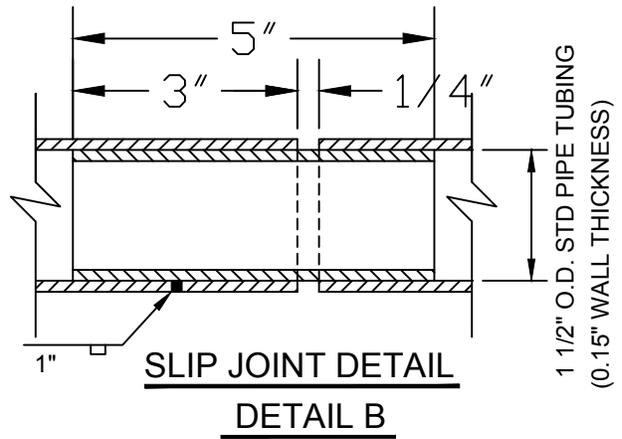
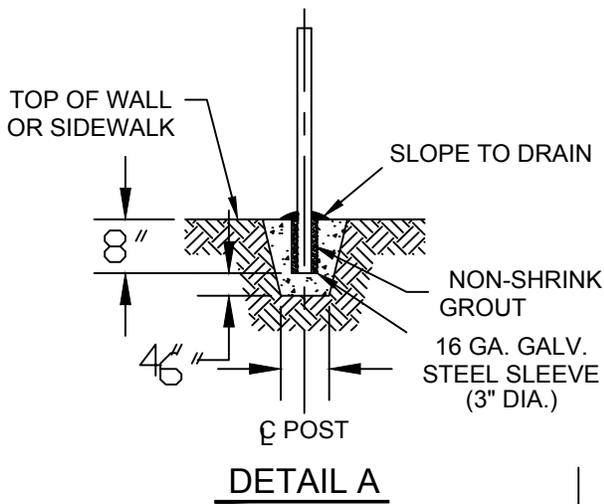
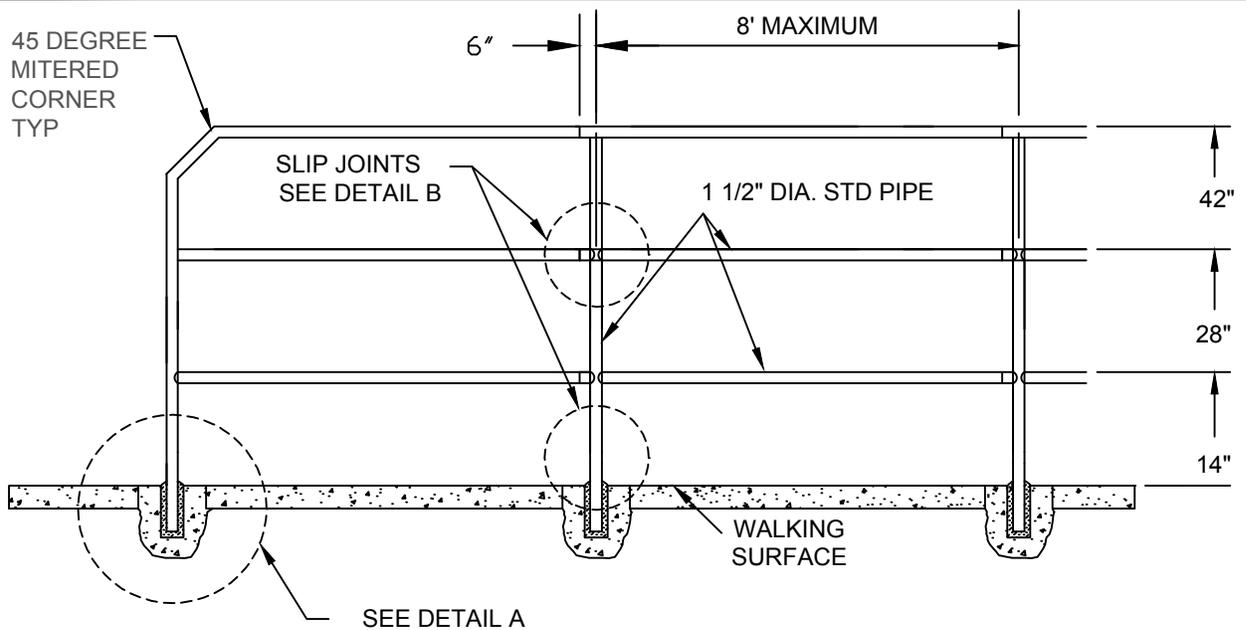


SECTION B-B

NOTES

- ① RAMP TEXTURING SHALL BE A BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL.
- ② FULL DEPTH EXPANSION JOINT.
- ③ NO LIP AT GUTTER LINE.
- ④ CURB RAMPS WILL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES.
- ⑤ TRUNCATED DOME PER ADA STANDARDS. TRUNCATED DOMES SHALL BE NON-CONCRETE, POLYMER, COMPOSITE, CAST IN PLACE UNITS COMPLIANT WITH ADA STANDARDS. COLOR SHALL BE UNIFORMLY INTEGRAL THROUGHOUT THE CROSS SECTION AND CONTRASTING COLOR WITH ADJACENT WALKWAY SURFACES PER ADA STANDARDS. SUBMIT SAMPLE TO CITY FOR APPROVAL PRIOR TO INSTALLATION.
- ⑥ POUR CURB SEPARATE FROM SIDEWALK POUR.
- ⑦ RAMP LENGTH VARIES WITH A MINIMUM OF 6' AND SHALL BE CALCULATED BASED ON A RAMP SLOPE WHICH DOES NOT EXCEED 8.3%. THE CURB RAMP MAX SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.

DRAWING NUMBER	STD3-15
SCALE	NONE
REVISION DATE	03/14
DEPARTMENT	PW



NOTES:

1. MATERIAL FOR PEDESTRIAN BARRIER SHALL BE ALUMINUM (ASTM B-429) OR GALVANIZED STEEL (ASTM 120) AS APPROVED BY THE CITY ENGINEER.
2. SEE STANDARD DRAWING No. 3-27 FOR ADDITIONAL FABRICATION AND SPECIFICATION REQUIREMENTS.
3. PROVIDE SLIP JOINTS AT STAIRWAY EXPANSION JOINTS AND AT EVERY 24 FEET ON CENTER MAXIMUM.
4. ADDITIONAL INTERNATIONAL BUILDING CODE REQUIREMENTS MAY APPLY.



PEDESTRIAN BARRIER

DRAWING NUMBER	STD3-26B
SCALE	NONE
REVISION DATE	02/2013
DEPARTMENT	PW

PEDESTRIAN RAIL (ALUMINUM)

ALUMINUM PEDESTRIAN RAIL SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THESE SPECIAL PROVISIONS AND STANDARD DRAWING NO. 3-26.

ALUMINUM PEDESTRIAN RAIL SHALL BE NATURAL ALUMINUM COLOR.

COMPLETED ALUMINUM RAILING UNITS SHALL BE ANODIZED AFTER FABRICATION CONFORMING TO THE REQUIREMENTS OF THE ALUMINUM ASSOCIATION STANDARD FOR ANODIZED ARCHITECTURAL ALUMINUM, CLASS I ANODIC COATING, AA-C22-A41.

WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR ALUMINUM STRUCTURES" OF THE ALUMINUM ASSOCIATION. ALL EXPOSED WELDS SHALL BE GROUND FLUSH WITH ADJACENT SURFACES.

THE BASE METAL FOR ALUMINUM RAILING SHALL BE ASA ALLOY DESIGNATION 6063-T6. PIPE AND TUBING SHALL BE EXTRUDED CONFORMING TO THE REQUIREMENTS OF ASTM B 429, PLATES AND SHEETS SHALL BE ROLLED CONFORMING TO ASTM B 209, AND RODS, BARS OR SHAPES SHALL BE EXTRUDED CONFORMING TO ASTM B 221.

HORIZONTAL RAILS AND VERTICAL SUPPORT POSTS SHALL BE 1 1/2 INCH DIAMETER STANDARD PIPE AND BALUSTERS SHALL BE 3/4 INCH DIAMETER STANDARD ALUMINUM PIPE. RAILS, POSTS, AND BALUSTERS SHALL BE MACHINE CUT TO PROVIDE A UNIFORM LENGTH PRIOR TO ASSEMBLY.

RAILING SHALL BE ERECTED AND ADJUSTED, IF NECESSARY, TO ASSURE A CONTINUOUS LINE AND GRADE.

PEDESTRIAN RAIL (GALVANIZED STEEL)

GALVANIZED PEDESTRIAN RAIL SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THESE SPECIAL PROVISIONS AND STANDARD DRAWING NO. 3-26.

STEEL RAILINGS MATERIALS SHALL BE WELDED OR SEAMLESS STEEL PIPE CONFORMING TO THE REQUIREMENTS OF ASTM A 120, STRUCTURAL STEEL CONFORMING TO ASTM A 36, OR TUBULAR SECTIONS OF HOT ROLLED MILD STEEL, CONFORMING TO ASTM A 501. ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. AFTER FABRICATION EACH SECTION OF RAILING SHALL BE HOT-DIPPED GALVANIZED WITH A MINIMUM ZINC COATING OF 2 OUNCES PER SQUARE FOOT. ALL BURRS AND SHARP EDGES SHALL BE REMOVED PRIOR TO GALVANIZING.

FIELD WELDS SHALL BE GALVANIZED WITH SUCH MATERIALS AS "GALVALLOY" OR GALVICON. PAINTING OF WELDS WILL NOT BE PERMITTED.

HORIZONTAL RAILS AND VERTICAL SUPPORT POSTS SHALL BE 1 1/2 INCH DIAMETER AND BALUSTERS SHALL BE 3/4 INCH DIAMETER STANDARD WEIGHT GALVANIZED STEEL PIPE. RAILS, POSTS AND BALUSTERS SHALL BE MACHINE CUT TO PROVIDE A UNIFORM LENGTH PRIOR TO ASSEMBLY.

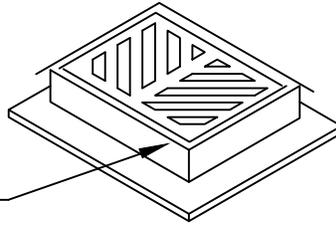
RAILING SHALL BE ERECTED AND ADJUSTED, IF NECESSARY, TO ASSURE A CONTINUOUS LINE AND GRADE.



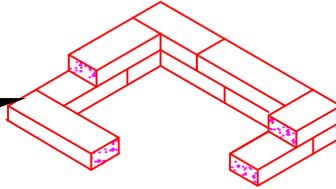
PEDESTRIAN BARRIER NOTES

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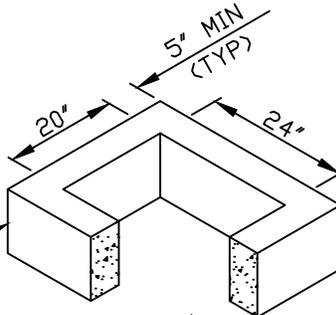
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SCALE	NONE
REVISION DATE	02/2013
DEPARTMENT	PW



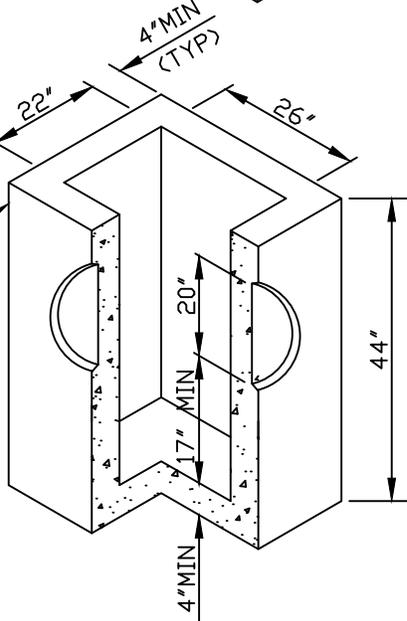
FRAME AND OPEN GRATE PER STD 4-5
 VANED GRATE PER STD 4-6
 SOLID COVER PER STD 4-7
 OPEN CURB FACE PER STD 4-11



2"x4"x8" SOLID BRICK
 USED FOR FINAL ADJUSTMENT
 TO GRADE. 6" HIGH MAX



2", 4", 6" OR 12" CONCRETE
 RISER SECTION
 CLASS 4000 CONC



PRECAST CONC BASE SECTION
 W/MAX OF ONE 20"Ø KNOCKOUT
 PER SIDE, ENTRANCE ANGLE
 TO BE LIMITED BY KNOCKOUTS
 CLASS 4000 CONC
 PIPE OUTER DIA PLUS CB
 WALL THICKNESS SHALL
 NOT EXCEED 20".

CATCH BASIN TO CONFORM TO WSDOT STANDARD PLAN B-1

NOTES:

- MAXIMUM DEPTH FROM FINISH GRADE TO PIPE INVERT SHALL BE 5 FEET. DEPTHS OVER 5 FEET SEE DETAIL #4-4
- PIPES SHALL NOT PENETRATE MORE THAN 3" BEYOND WALL, AND PENETRATION SHALL BE MUDDED INTO A SMOOTH ROUNDED CONDITION.



CATCH BASIN TYPE I

DRAWING NUMBER	STD4-2
SCALE	NONE
REVISION DATE	08/03
DEPARTMENT	PW

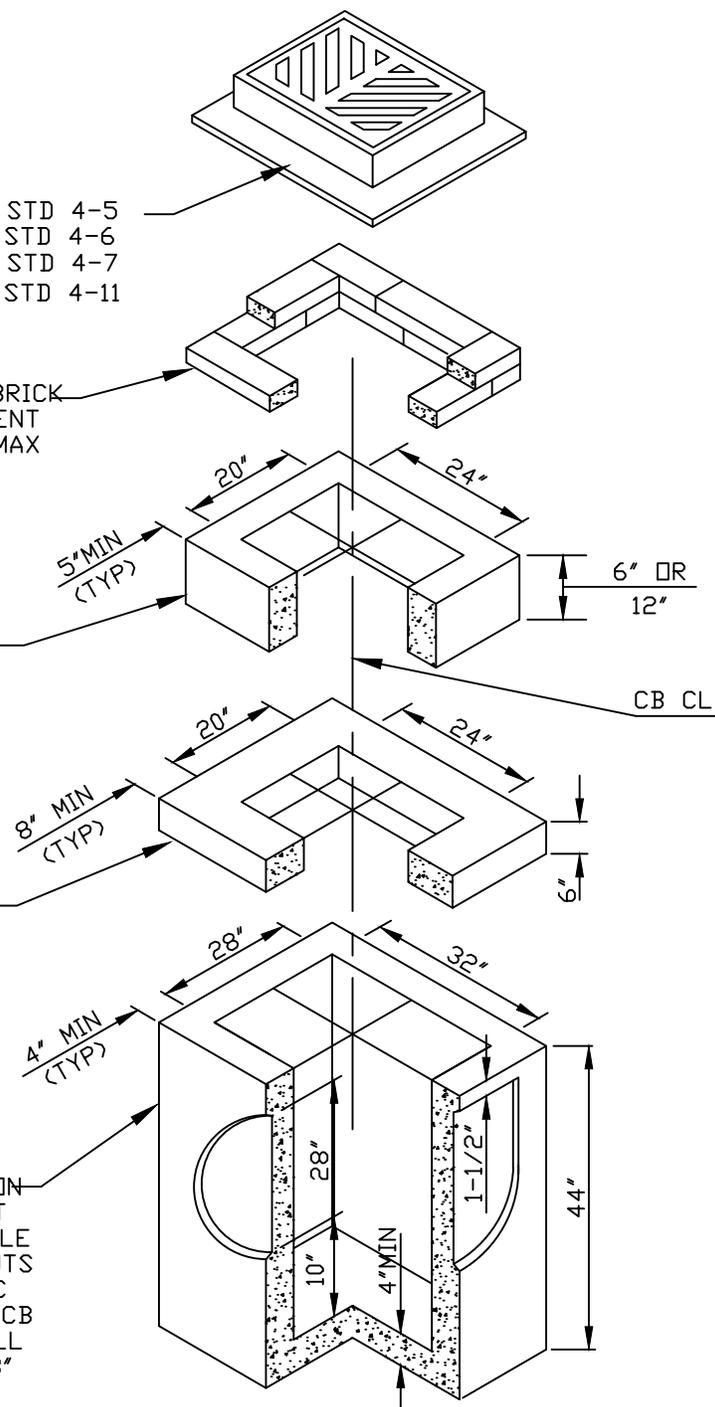
FRAME AND OPEN GRATE PER STD 4-5
 VANED GRATE PER STD 4-6
 SOLID COVER PER STD 4-7
 OPEN CURB FACE PER STD 4-11

2"x4"x8" SOLID BRICK
 USED FOR FINAL ADJUSTMENT
 TO GRADE. 6" HIGH MAX

2", 4", 6" OR 12" CONCRETE
 RISER SECTION
 CLASS 4000 CONC

6" CONCRETE
 REDUCING TOP SLAB
 CLASS 4000 CONC

PRECAST CONC BASE SECTION
 W/MAX OF ONE 28"Ø KNOCKOUT
 PER SID. ENTRANCE ANGLE
 TO BE LIMITED BY KNOCKOUTS
 CLASS 4000 CONC
 PIPE OUTER DIA PLUS CB
 WALL THICKNESS SHALL
 NOT EXCEED 28"



CATCH BASIN TO CONFORM TO WSDOT STANDARD PLAN B-1A

NOTES:

MAXIMUM DEPTH FROM FINISH GRADE TO PIPE INVERT SHALL BE 5 FEET.
 DEPTHS OVER 5 FEET SEE DETAIL #4-4.

PIPES SHALL NOT PENETRATE MORE THAN 3" BEYOND WALL, AND
 PENETRATIONS SHALL BE MUDDED INTO A SMOOTH ROUNDED CONDITION.

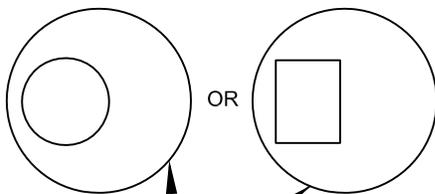
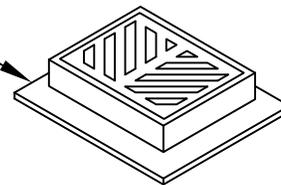


CATCH BASIN TYPE I-L

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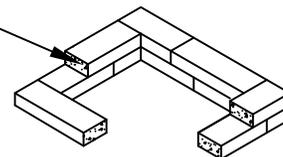
DRAWING NUMBER	STD4-3
SCALE	NONE
REVISION DATE	08/03
DEPARTMENT	PW

FRAME AND SOLID GRATE PER STD 4-5
 SLOTTED GRATE PER STD 4-6
 VANED COVER PER STD 4-8
 OPEN CURB FACE PER STD 4-11

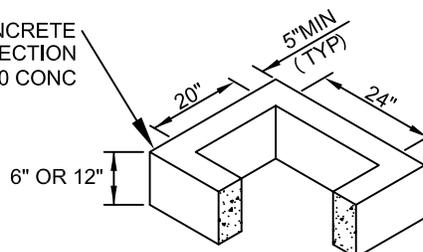


TOP SLAP WITH
 24" ROUND ACCESS OR
 20"x24" RECTANGULAR ACCESS

2"x4"x8" SOLID BRICK
 USED FOR FINAL ADJUSTMENT
 TO GRADE. 6" HIGH MAX

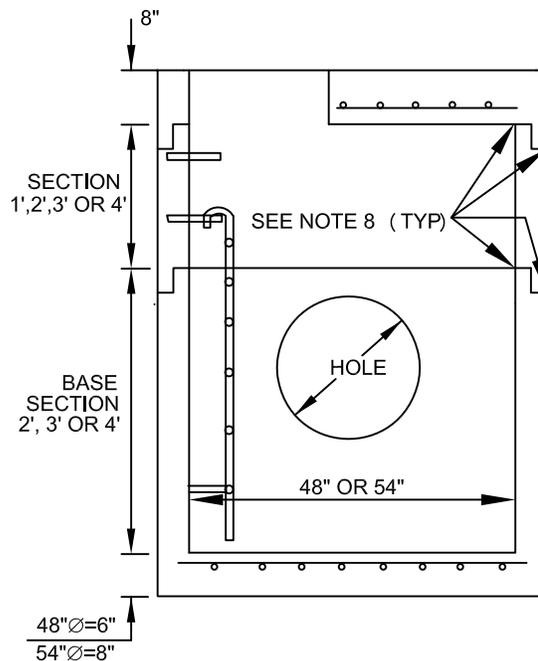


2", 4", 6" OR 12" CONCRETE
 RISER SECTION
 CLASS 4000 CONC



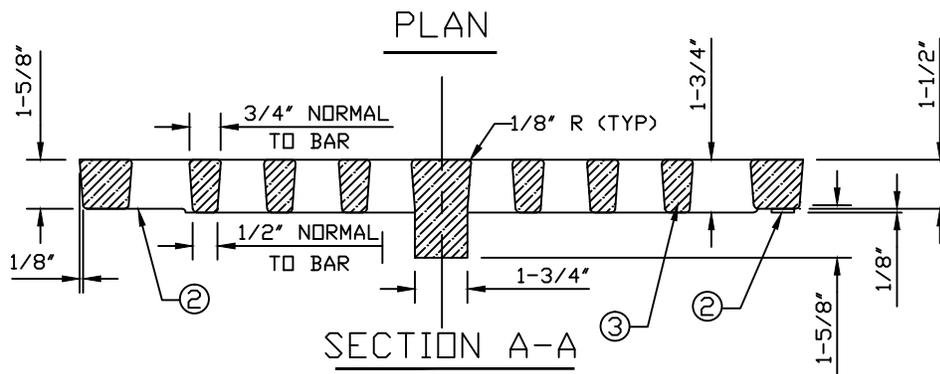
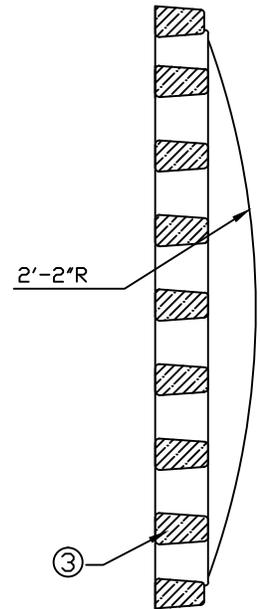
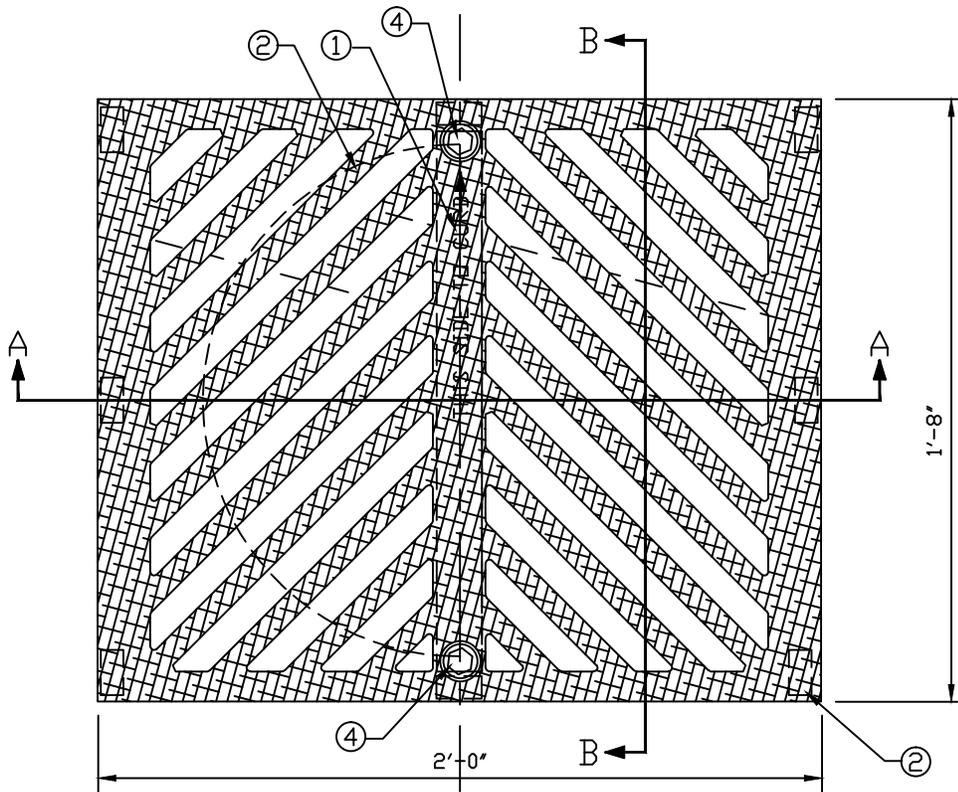
NOTES:

- 1 ALL TYPE 2 CB'S EQUIPPED WITH OPEN GRATES SHALL BE LOCKING TYPE.
- 2 ALL TYPE 2 CB'S NOT IN PAVED AREAS SHALL BE EQUIPPED WITH LOCKING LIDS.
- 3 CB'S SHALL BE SET SO THAT STEPS ARE DIRECTLY UNDER OPENING.
- 4 ALL TYPE 2 CB'S SHALL BE EQUIPPED WITH STEPS AND LADDER PER STD 6-7.
- 5 CONCRETE SHALL BE CLASS 4000.
- 6 MIN DISTANCE FROM INVERT TO CB BOTTOM SHALL BE 2.0'.
- 7 CB SECTIONS AND LID WILL BE HS20 TRAFFIC LOAD CERTIFIED BY MFG.
- 8 GROUT INSIDE AND OUTSIDE CB SECTIONS.
- 9 HOLE SIZE = PIPE OD + 5". MAX
 MAX HOLE SIZE = 36" (48" CB)
 MAX HOLE SIZE = 42" (54" CB)
- 10 PIPES SHALL NOT PENETRATE MORE THAN 3" BEYOND WALL AND PENETRATIONS SHALL BE MUDDED INTO A SMOOTH ROUNDED CONDITION.



CATCH BASIN TYPE 2 (48" OR 54")

DRAWING NUMBER	STD4-4
SCALE	NONE
REVISION DATE	08/14
DEPARTMENT	PW

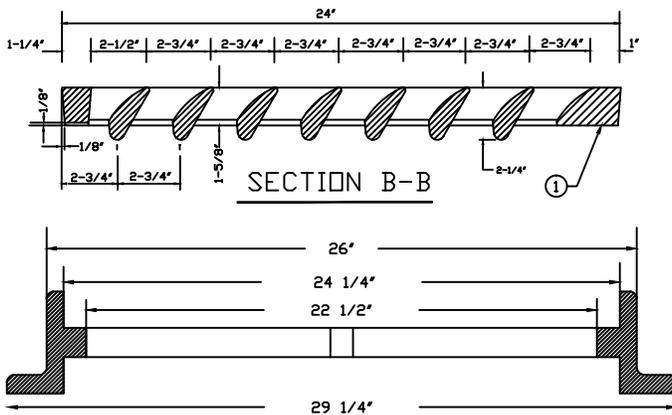
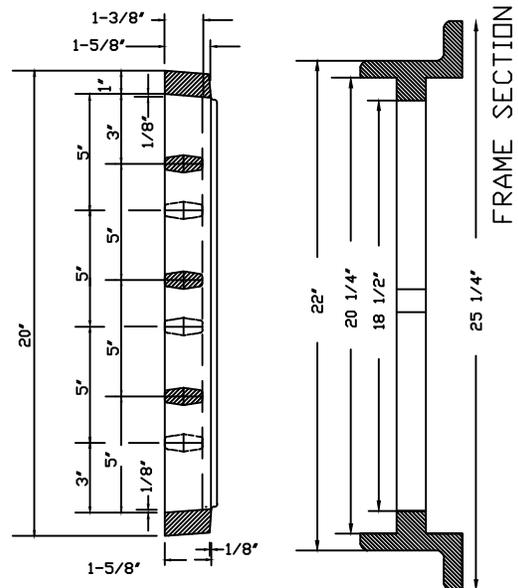
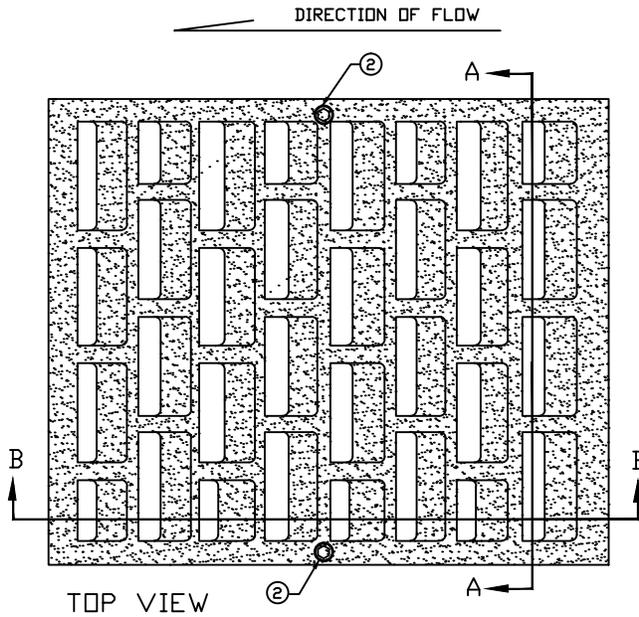


SECTION B-B

NOTES:

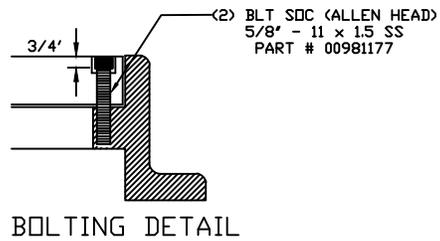
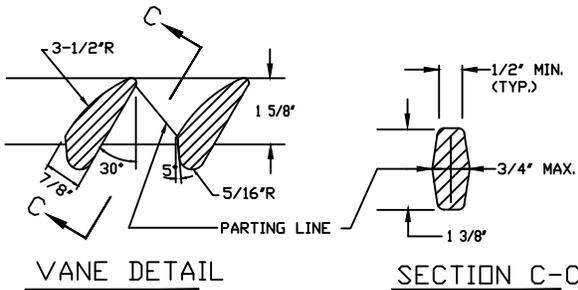
- ① FOUNDRY NAME, THIS SIDE TO CURB W/ARROW AND (DI) FOR DUCTILE IRON SHALL BE EMBOSSED ON TOP OF GRATE WITH 1/16" RECESSED LETTERS.
- ② SEATING OF GRATE SHALL BE ACCOMPLISHED BY ONE OF THE FOLLOWING:
A. 8 INTEGRALLY CAST PADS (1-1/2"x3/4"x1/8").
B. MACHINE BOTTOM SURFACE OUTSIDE A 17" DIA
- ③ MATERIAL USED SHALL BE DUCTILE IRON PER ASTM-A536, GRADE 80-55-06. ALL CASTINGS SHALL HAVE A BITUMINOUS COATING.
- ④ WHEN LOCKING GRATE REQUIRED HOLES WILL BE PROVIDED IN CASTING TO ALLOW FOR TWO 5/8" DIA STAINLESS STEEL SOCKET HEAD CAP SCREWS SO THAT NO PART OF HEAD PROTRUDES ABOVE TOP OF CASTING.
- ⑤ GRATE TO BE USED WITH FRAME SHOWN IN STANDARD DWG 4-5.

DRAWING NUMBER	STD4-6
SCALE	NONE
REVISION DATE	08/03
DEPARTMENT	PW



NOTE:

- ① MATERIAL USED SHALL BE DUCTILE IRON PER ASTM-A536, GRADE 80-55-06, WITH BITUMINOUS COATING.
- ② FRAME AND VANED GRATE LOCKABLE EAST JORDAN #00775013 & #00775043 OR EQUAL.
- ③ GRATE TO BE USED WITH FRAME SHOWN IN STD DWG 4-5. CAST IRON ASTM A48 CL35
- ④ THE NAME OF THE MANUFACTURER AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
- ⑤ DIMENSIONS SHALL HAVE A +/- TOLERANCE, EXCEPT AS NOTED.
- ⑥ EDGES SHALL HAVE A 1/8" RADIUS, 1/8" CHAMFER OR COMPLETE DEBURRING.
- ⑦ AS AN ALTERNATE, EIGHT PADS 1 1/2" X 3/4" X 1/8" INTEGRALLY CAST WITH THE GRATE MAY BE USED.
- ⑧ LOAD RATING HEAVY DUTY



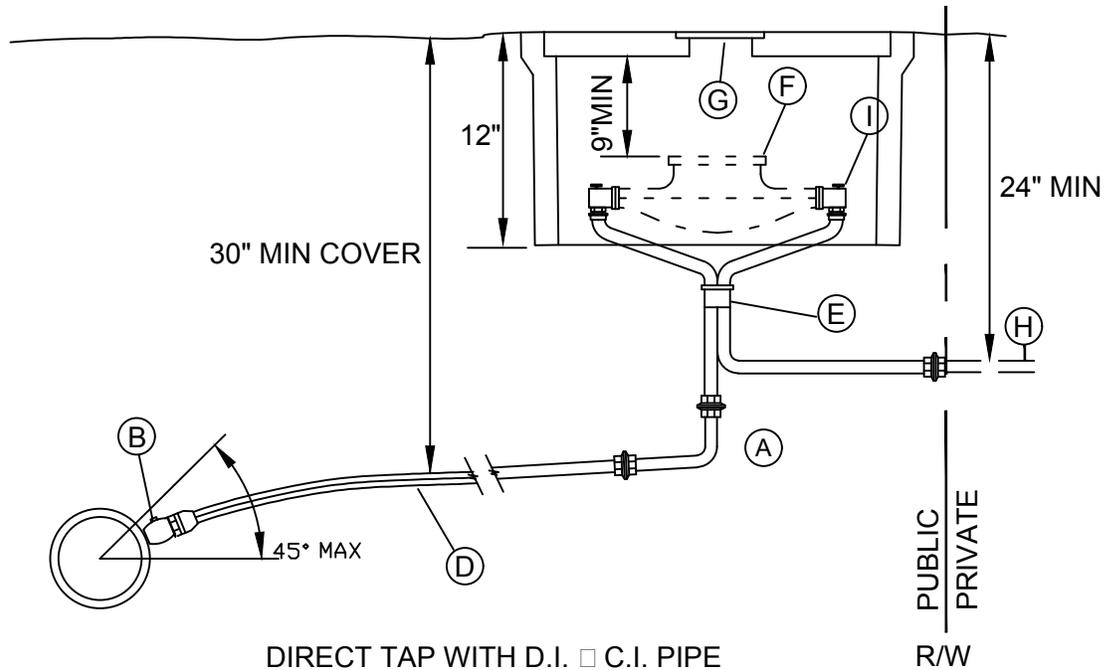
V.S.D.O.T. STD PLAN B-2B



VANED CATCH BASIN GRATE
(STANDARD NOT OPEN CURB
FACE)

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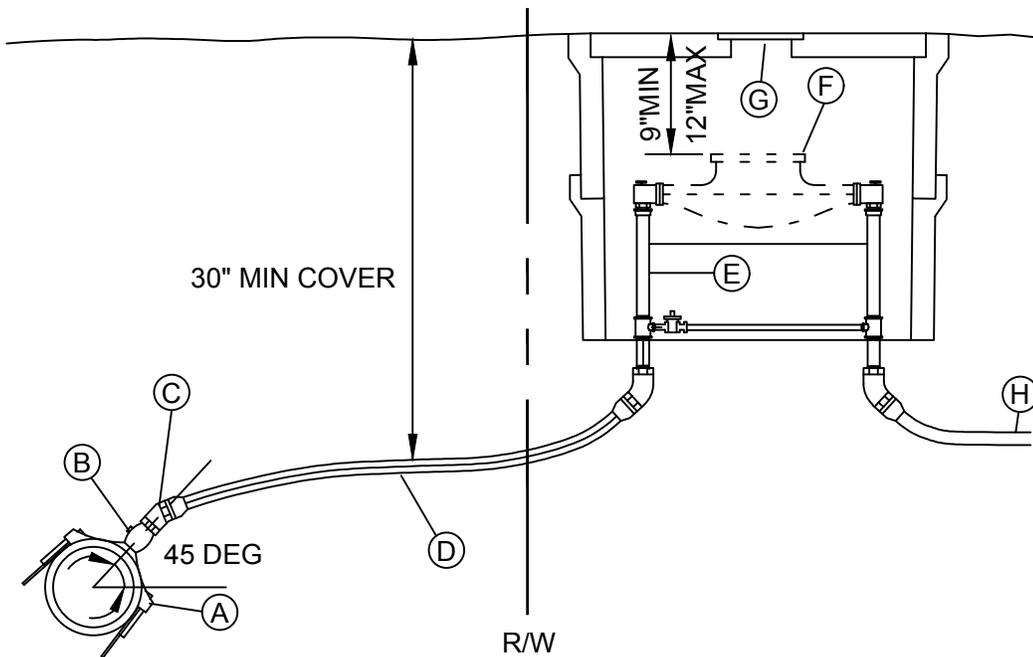
DRAWING NUMBER	STD4-8
SCALE	NONE
REVISION DATE	08/03
DEPARTMENT	PW



NOTE:

- (A) COMPRESSION FITTING (OR APPROVED EQUAL). USE STAINLESS STIFFENER WITH POLYPIPE. BAND CLAMPS AND BARBED FITTINGS NOT ALLOWED.
- (B) CORPORATION STOPS: DIRECT TAP WITH DUCTILE IRON.
DIRECT TAP AWWA CC TAPER THREAD INLET X MALE IRON PIPE THREAD OUTLET □FB400-3
3/4" □ 1" - FORD BALLCORP CORPORATION STOPS □FB400-3 OR FB500-3
(EQUAL MUELLER OR A.Y. MCDONALD BRASS MAY BE SUBSTITUTED).
ROMAC AND MUELLER SADDLES WITH C.C. THREAD OR M.I.P. THREAD DUAL
STAINLESS STEEL STRAPS TO BE USED ON ALL A.C., PLASTIC, AND STEEL
MAINS 3" DIA AND LARGER.
- (D) COPPER TUBING TYPE K, 2 INCHES OF SAND BEDDING BELOW,
6 INCHES OF SAND ABOVE, CONTINUOUS UNBROKEN LENGTH
FROM MAIN TO METER SETTER WITH 1 FOOT OF SLACK LOOP.
- (E) 3/4" METER SETTER - FORD VBH92-12W-11-33A, OR A.Y. MCDONALD 62-212 WCDD 33X15.
1" METER SETTER - FORD VBH94-15W-11-44A, OR A.Y. MCDONALD 62-415 WDDD 44X18.
VERTICAL IN - HORIZONTAL OUT □ 15" TAIL PIECE FOR 3/4" □ 1".
- (F) METERS SHALL BE INSTALLED BY THE CITY WATER DIVISION AT OWNERS EXPENSE.
- (G) METER BOXES - 3/4" - FOGTITE B9 (CONCRETE) WITH TOUCH READ ADAPTER.
METER BOXES - 1" - FOGTITE B10 (CONCRETE) WITH TOUCH READ ADAPTER.
- (H) COPPER TUBING TYPE K, PEX OR POLYETHYLENE LINE. A COPPER TRACER WIRE IS REQUIRED
FOR NON-METALLIC PIPE
- (I) SINGLE CHECK VALVE. FORD HA34-323 OR EQUAL
AS DETERMINED BY THE PUBLIC WORKS DEPARTMENT.

DRAWING NUMBER	STD5-1
SCALE	NONE
REVISION DATE	03/17
DEPARTMENT	PW

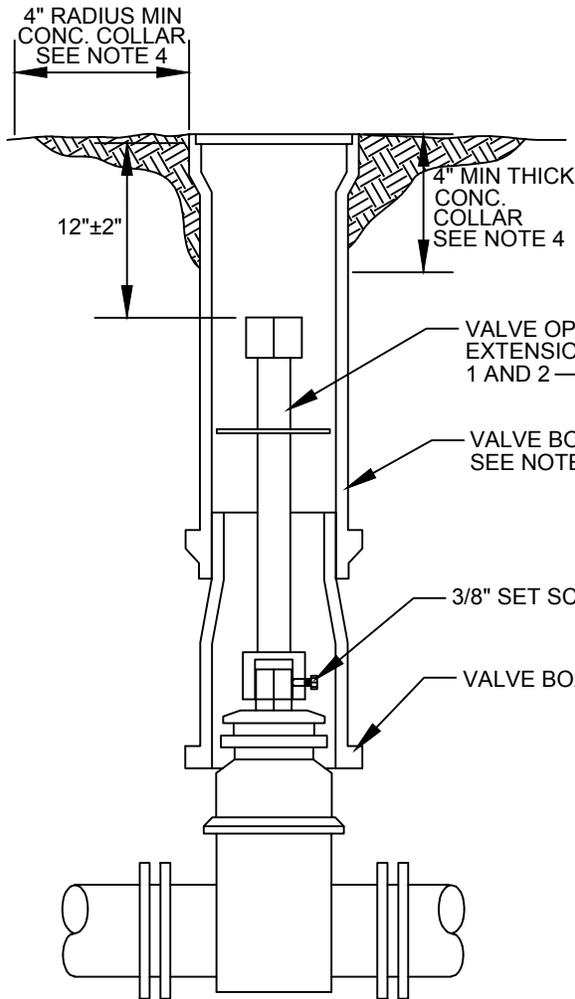


NOTE:

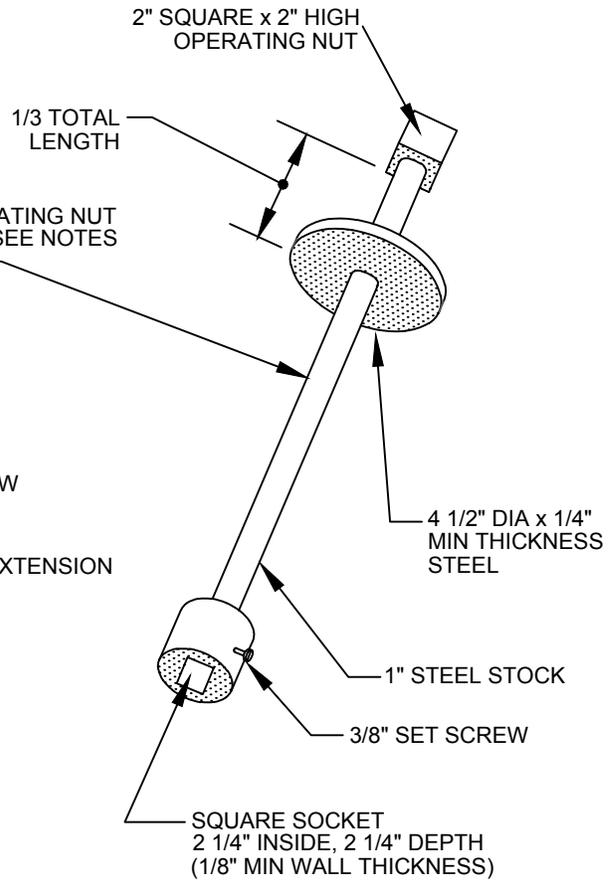
- (A) ROMAC AND MUELLER DOUBLE STRAP SERVICE SADDLES WITH C.C. THREAD OR I.P. THREAD TO BE USED ON ALL MAINS.
- (B) CORPORATION STOPS: 1 1/2" □ 2" - FORD BALLCORP CORPORATION STOP □FB400 OR □FB500 (EQUAL MUELLER OR A.Y. MCDONALD BRASS MAY BE SUBSTITUTED).
- (C) PACK JOINT AND APPROPRIATE STAINLESS STEEL STIFFENER OR COMPRESSION FITTING WITH 1/8 OR 1/4 BEND AS REQUIRED.
- (D) COPPER TUBING TYPE K, 2 INCHES OF SAND BEDDING BELOW, 6 INCHES OF SAND ABOVE, CONTINUOUS UNBROKEN LENGTH FROM MAIN TO METER SETTER WITH 1 FOOT OF SLACK LOOP.
- (E) METER SETTERS: 1 1/2" - FORD □VBH86-12B-11-66
2" - FORD □VBH87-12B-11-77
VERTICAL IN - VERTICAL OUT WITH BYPASS.
- (F) METERS SHALL BE INSTALLED BY THE CITY WATER DIVISION AT OWNERS EXPENSE.
- (G) METER BOXES SHALL BE: FOGTITE NO. 3 METER BOX. CONCRETE LID WITH DROP-IN INSPECTION PLATE IN NON-TRAFFIC AREAS. 3/8" THICK STEEL TRAFFIC LID IN TRAFFIC AREAS SET BOTTOM OF LOWER BOX BELOW BYPASS.
- (H) COPPER TYPE K, PEX OR POLYETHYLENE LINE □A COPPER TRACER WIRE IS REQUIRED FOR NON-METALLIC PIPE

PRIVATE LINE INSTALLATION SHALL COMPLY WITH 7-15.3 OF THE 1998 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

DRAWING NUMBER	STD5-2
SCALE	NONE
REVISION DATE	7/19
DEPARTMENT	PW



VALVE BOX AND EXTENSION

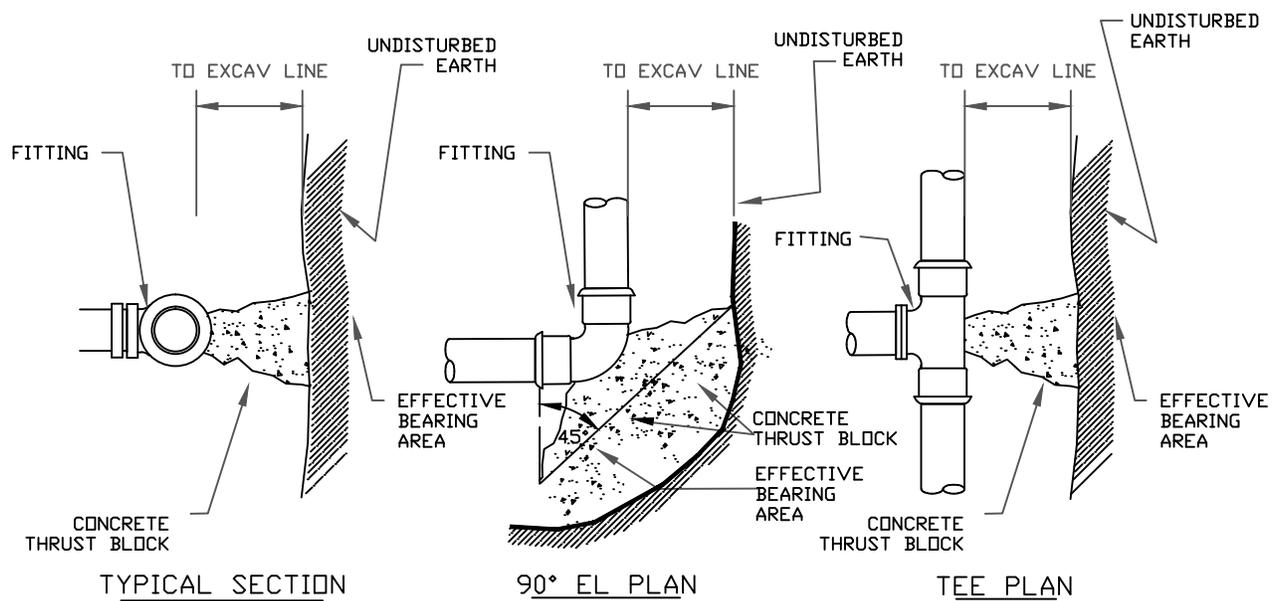


VALVE OPERATING NUT EXTENSION

NOTES:

1. VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN THREE (3) FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG. ONLY ONE EXTENSION WILL BE ALLOWED PER VALVE.
2. ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL, SIZED AS NOTED, AND PAINTED WITH TWO (2) COATS OF METAL RUST RESISTANT PAINT.
3. VALVE BOXES SHALL BE CAST IRON, TWO PIECE UNITS AND CAST IRON VALVE BOX LID WITH TABS ALIGNED IN THE DIRECTION OF THE FLOW OF WATER.
4. VALVE BOXES TO BE ADJUSTED FLUSH WITH FINISHED PAVING. VALVE BOX COLLARS REQUIRED IF VALVE BOX IS OUT OF PAVING AREA. COLLARS TO BE FLUSH WITH FINISHED LANDSCAPE, SOD, OR UNIMPROVED AREAS. SLOPE COLLARS AWAY FROM LID AT 2" (TYP).

DRAWING NUMBER	STD5-4A
SCALE	NONE
REVISION DATE	03/17
DEPARTMENT	PW

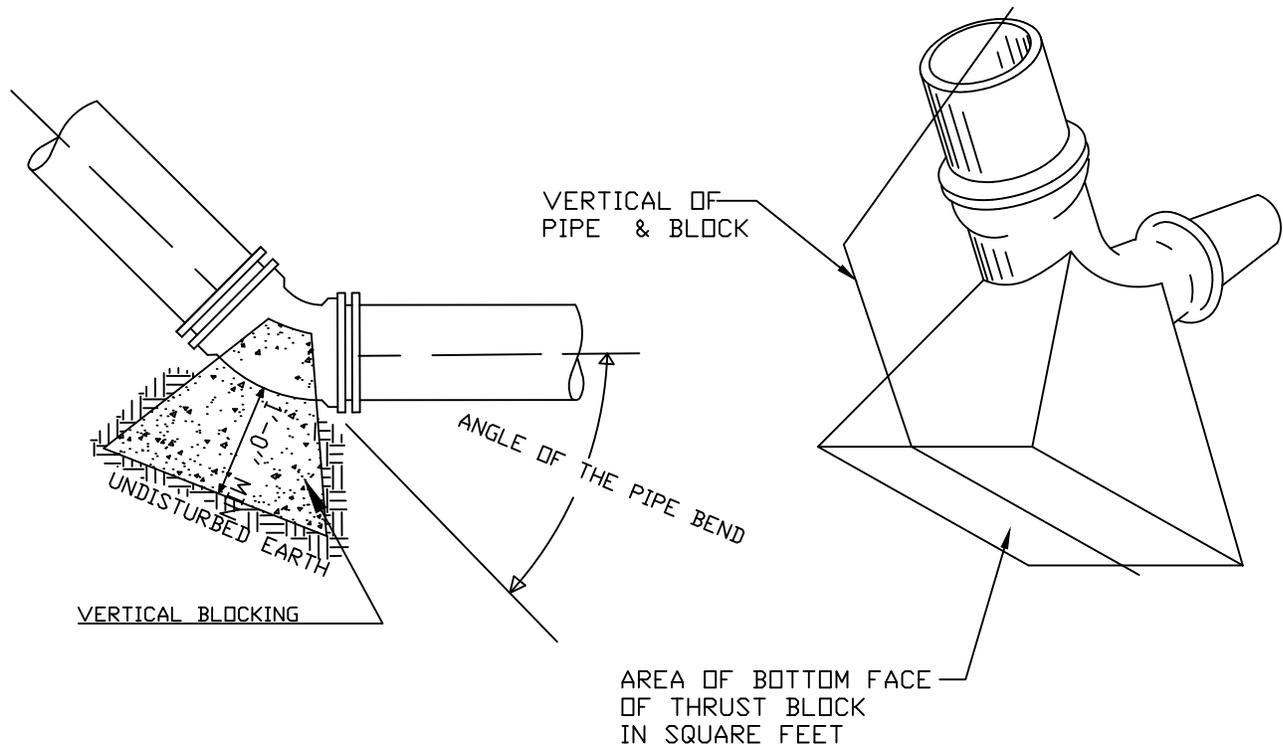


MINIMUM BEARING AREA TABLE

FITTING D	TEE OR DEAD END CAP	90°	45°	22 1/2°	11 1/4°
6"	4 SQ FT	6 SQ FT	3 SQ FT	2 SQ FT	2 SQ FT
8"	7 SQ FT	10 SQ FT	6 SQ FT	3 SQ FT	2 SQ FT
10"	10 SQ FT	15 SQ FT	9 SQ FT	5 SQ FT	3 SQ FT
12"	14 SQ FT	22 SQ FT	12 SQ FT	6 SQ FT	4 SQ FT
16"	25 SQ FT	38 SQ FT	21 SQ FT	11 SQ FT	7 SQ FT
18"	32 SQ FT	32 SQ FT	27 SQ FT	14 SQ FT	8 SQ FT

NOTES:

1. BEARING AREA TABLE BASED ON 250 PSI PRESSURE AND 2000 PSF SOIL BEARING. IF PRESSURE IS GREATER OR SOIL BEARING IS LESS, THE THRUST BLOCK SIZE SHALL BE INCREASED.
2. THIS TABLE REPRESENTS THE 'MINIMUM' CONSTRUCTION STANDARDS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZE OF ALL THRUST BLOCKS BASED ON EXISTING AND LOCAL CONDITIONS.
3. ALL BLOCKS ON TEES MUST BE SEPARATED FOR DIRECTION OF THRUST.
4. SHEET PLASTIC OVER NUTS AND BOLTS PRIOR TO CONCRETE POUR.
5. ALL FITTING TO HAVE THRUST BLOCKING AND ALL THRUST BLOCKS TO BE CONCRETE AND ARE TO BE POURED IN PLACE.
6. BLOCKS TO BE FORMED AS REQUIRED BY LYNNWOOD INSPECTOR.

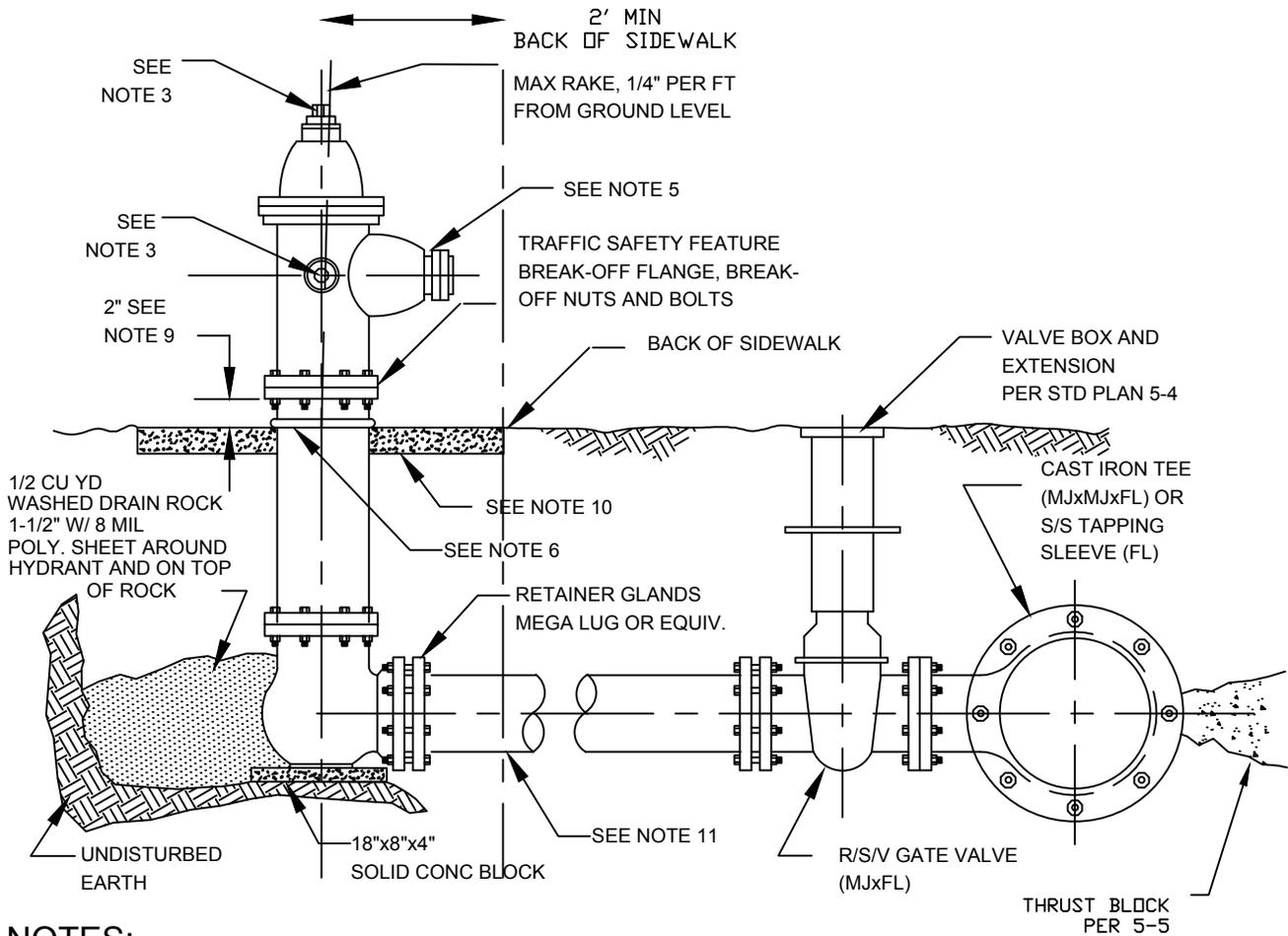


TYPE "C" BLOCKING FOR 22 1/2, 45, 60 AND 90 VERTICAL BENDS				
SOIL	THRUST BLOCK AREA IN SQUARE FEET			
	FIRM SILT OR FIRM SILTY SAND			
PIPE SIZE (INCHES)	22 1/2° BEND	45° BEND	60° BEND	90° BEND
4	1.7	4.2	3.2	5.8
6	3.8	9.4	7.2	13.3
8	6.7	16.7	12.8	23.3
12	15	28.8	37.5	53

AREAS CALCULATED ON 300 PSI TEST PRESSURE, 3' MIN COVER OVER WATER MAIN AND 900 LB/FT³ ALLOWABLE SOIL BEARING PRESSURE

NOTES:

- 1- Location and size of blocking for pipe larger than 12" and for soil types different than shown shall be determined by the engineer.
- 2- All blocking for vertical fittings(poured in place)shall bear against undisturbed native ground.
- 3- All poured Thrust Blocks shall be in place and sufficient time shall be allowed for the concrete to cure and trench shall be backfilled and compacted prior to pressure testing
- 4- After installation, shackle rods & turnbuckles shall be cleaned and coated with 2 coats of asphaltic varnish, Royston Roykote #612XM or approved equal.
- 5- Shackle rods shall be round mild steel, ASTM A-36 with threads on ends only.
- 6- Blocking against fittings shall bear against the greatest fitting surface area possible, but shall not cover or enclose bell ends, joint bolts or glands.
- 7- All blocking to be concrete.



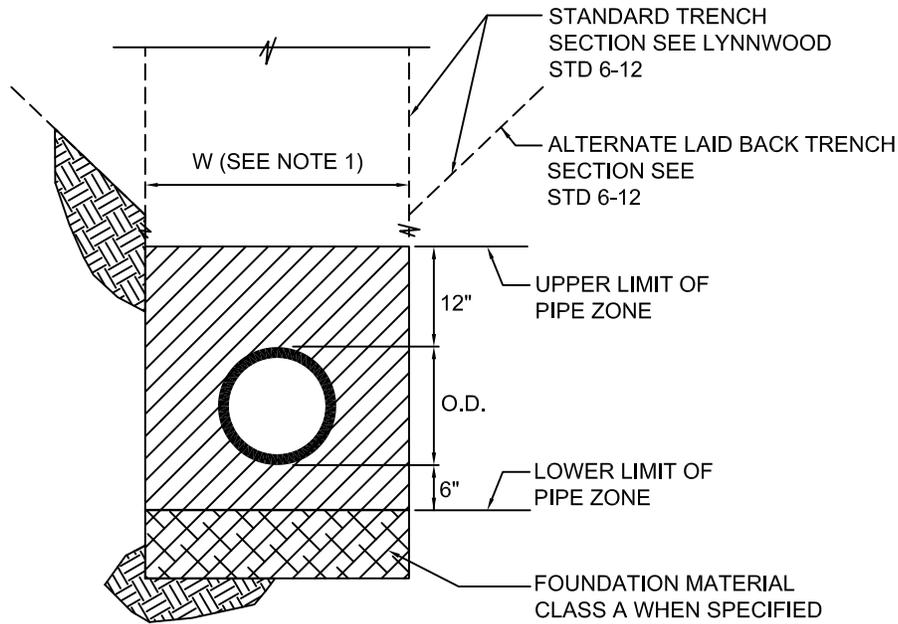
NOTES:

1. HYDRANTS AND ALL MATERIALS TO BE APWA OR AWWA APPROVED (HYDRANTS SHALL BE MUELLER CENTURION A-423 OR AMERICAN DARLING B62B.
2. 5-1/4" MAIN VALVE SEAT.
3. 1-1/4" OPERATING NUT AND CAP NUT FOR 2-1/2" PORTS - CHAINS REMOVED.
4. NATIONAL STANDARD THREAD ON THE 2-1/2" PORT.
5. NATIONAL STANDARD THREAD W/4" STORZ ADAPTER AND CAP ON 4 1/2" PORT.
6. IF HYDRANT RISES THROUGH CONCRETE, USE 1/2X4" EXPANSION STRIP AROUND HYDRANT BARREL. IN ADDITION, INSTALLATION OF THE HYDRANT ON PRIVATE PROPERTY SHALL EQUAL OR EXCEED THE STANDARDS FOR INSTALLATION OF PUBLIC FIRE HYDRANTS IN THE CITY OF LYNNWOOD.
7. PROVIDE FOR VEHICULAR TRAFFIC PROTECTION WHEN NECESSARY PER STD. PLAN 5-8.
8. 4 1/2" PORT TO BE FACING STREET OR ROADWAY FOR FIRE ENGINE ACCESS.
9. BREAK-OFF FLANGE TO BE 2" ABOVE GROUND LEVEL.
10. INSTALL CONCRETE PAD AROUND HYDRANT IN UNPAVED, SOD AND ASPHALT AREAS. PAD TO BE 3'X3'X4".
11. HYDRANT CONNECTION PIPE TO BE DUCTILE IRON CLASS 52, ANY INTERMEDIATE JOINTS TO BE MJ WITH RETAINER GLANDS (MEGA LUG® OR EQUIVALENT) OR FIELD LOK® GASKET
12. FIRE HYDRANTS SHALL BE PAINTED WITH TWO COATS OF HIGH GLOSS SAFETY YELLOW "RUST-OLEUM" TYPE PAINT.
13. INSTALL RAYOLITE MODEL 44 BLUE REFLECTOR OR APPROVED EQUAL. OFFSET AT CENTERLINE OF ROAD ON SIDE WITH HYDRANT



FIRE HYDRANT ASSEMBLY

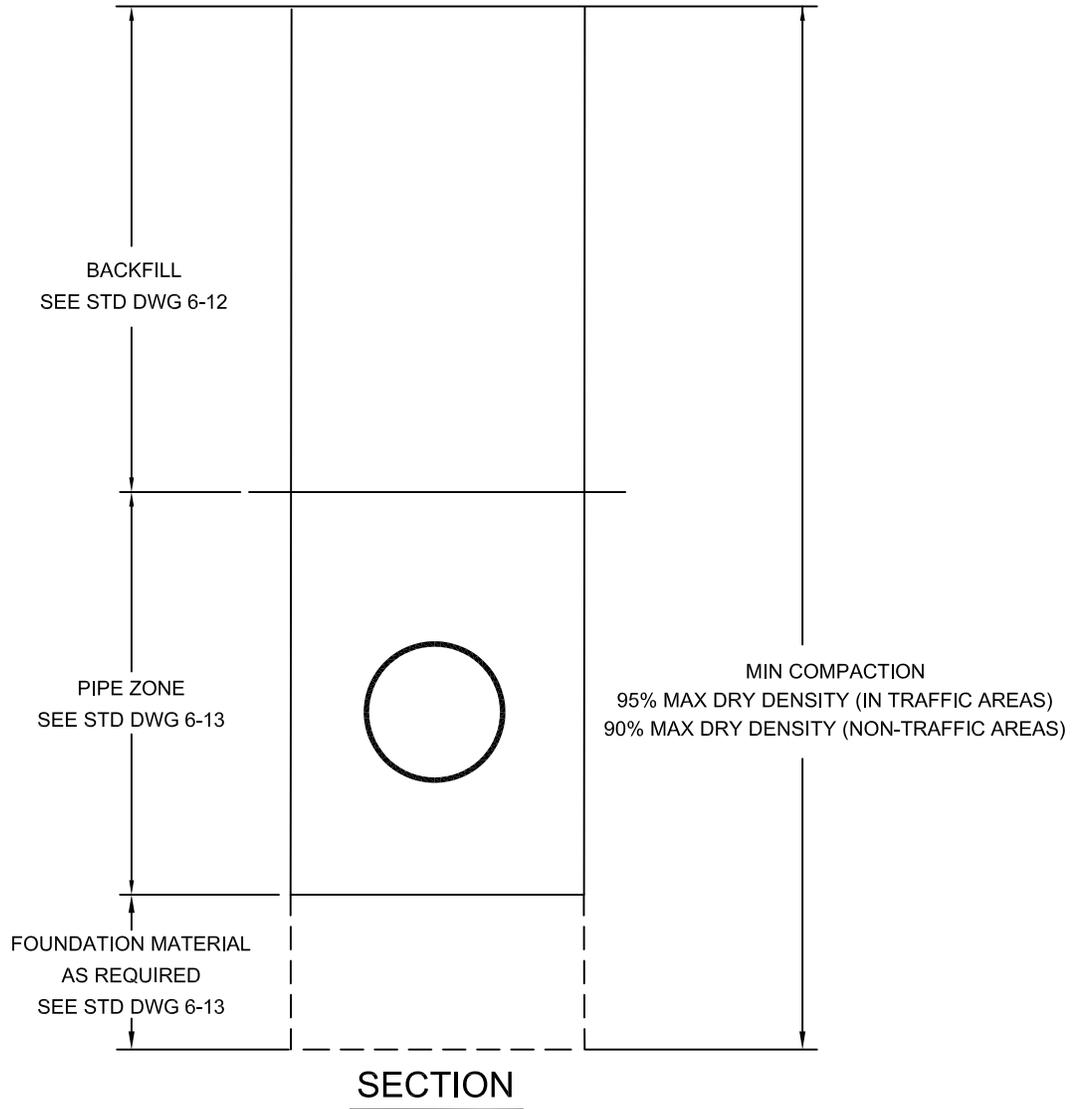
DRAWING NUMBER	STD5-7
SCALE	NONE
REVISION DATE	05/17
DEPARTMENT	PW



NOTES

1. LIMITS OF TRENCH
 W = MAXIMUM WIDTH OF TRENCH
 FOR PIPES 15" OR LESS IN DIAMETER
 W= 40" MINIMUM
 FOR PIPES 18" OR GREATER IN DIAMETER
 W= 1 1/2 X I.D. + 18".
2. GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL CONSIST OF CRUSHED, PROCESSED, OR NATURALLY OCCURRING GRANULAR MATERIAL. IT SHALL BE ESSENTIALLY FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEIOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT READILY PER WSDOT 9-03.12 (3).
3. PEA GRAVEL, SAND, 5/8" CHIPS, CDF AND 5/8" CSTC MAY BE REQUIRED AT THE DISCRETION OF THE PUBLIC WORKS INSPECTOR.
4. ALL FOUNDATION MATERIAL, IF REQUIRED, SHALL BE FOUNDATION MATERIAL CLASS "A" PER WSDOT SPEC 9-03.17
 REQUIRED COMPACTION PROCEDURES SHALL COMPLY WITH WSDOT SPEC 2-06. SEE LYNNWOOD STD. 6-17 FOR ADDITIONAL INFORMATION.

DRAWING NUMBER	STD6-13
SCALE	NONE
REVISION DATE	03/14
DEPARTMENT	PW

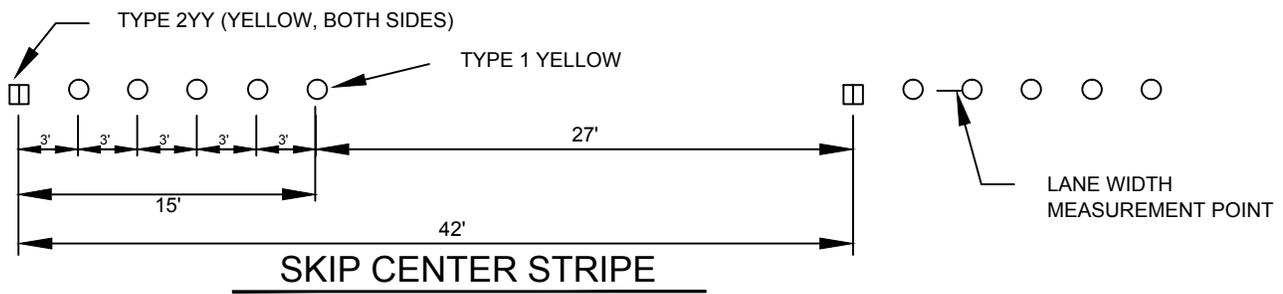
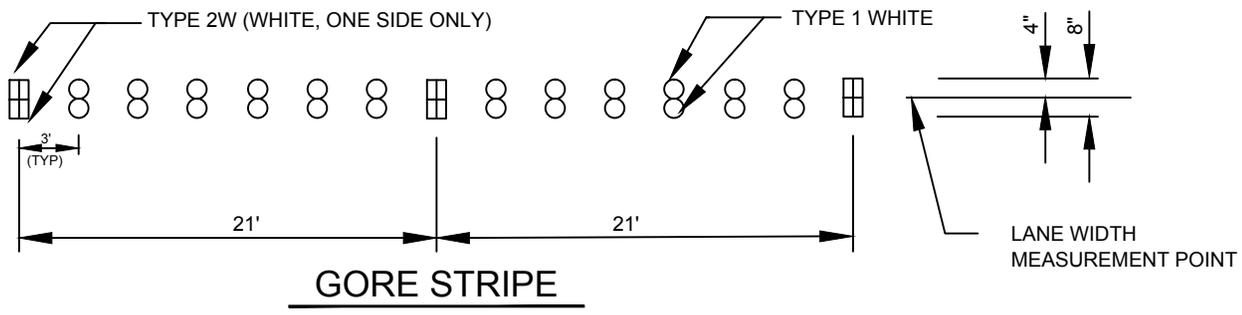
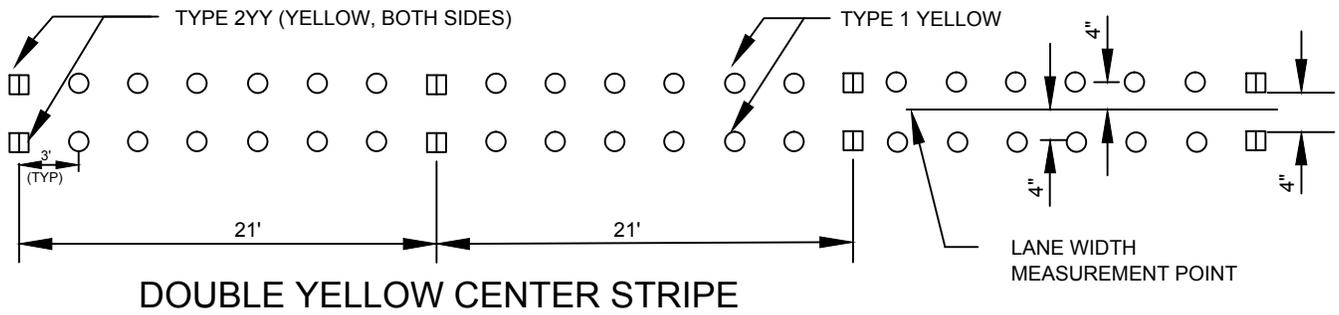
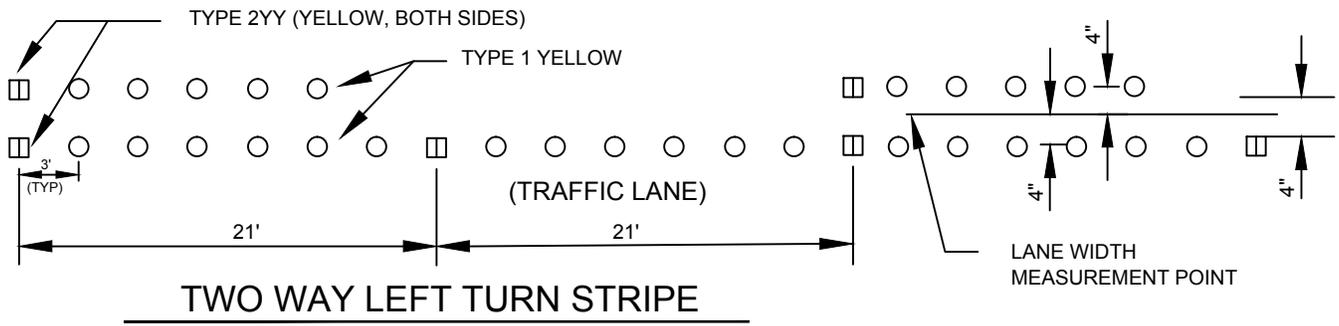
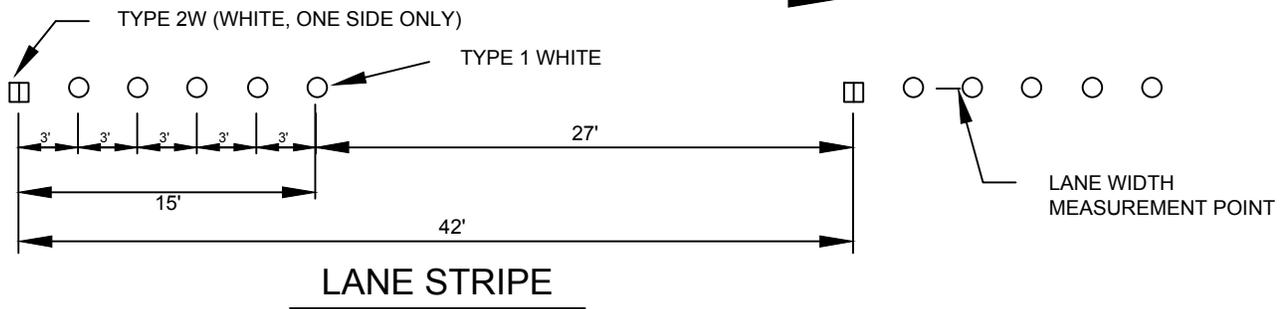


NOTES:

1. ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES BEFORE COMPACTION UNLESS AUTHORIZED BY THE ENGINEER DUE TO THE CHARACTER OF THE MATERIAL AND THE COMPACTING EQUIPMENT.
2. MECHANICAL COMPACTION OF BACKFILL MATERIAL SHALL NOT BEGIN UNTIL THE DEPTH OF COMPACTED BACKFILL MATERIAL IS 2 FEET ABOVE THE TOP OF PIPE.
3. EACH LIFT SHALL BE MECHANICALLY COMPACTED TO THE REQUIRED DENSITY PRIOR TO PLACING SUCCEEDING LIFTS OF BACKFILL MATERIAL.
4. COMPACTION TESTS SHALL BE AS REQUIRED BY THE CITY ENGINEER, BUT IN NO CASE LESS THAN 2 TESTS EVERY 200 FEET OF TRENCH (ONE AT SUBGRADE AND ONE AT 50% OF TRENCH DEPTH).

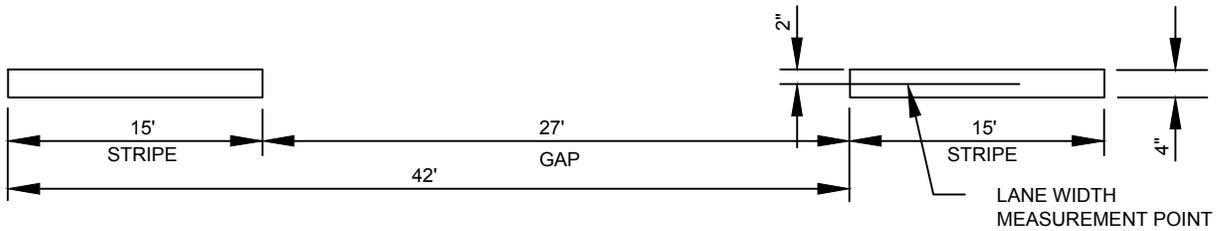
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SCALE	NONE
REVISION DATE	01/14
DEPARTMENT	PW

TYP TRAFFIC FLOW →

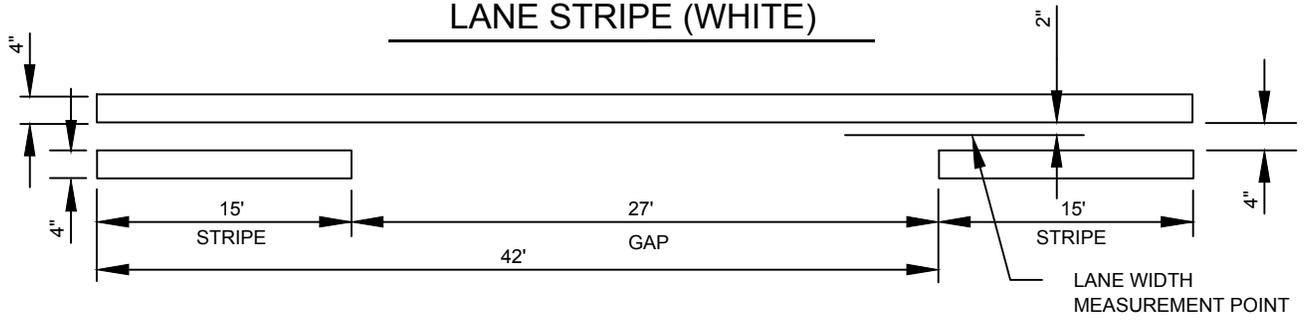


PAVEMENT MARKING DETAILS

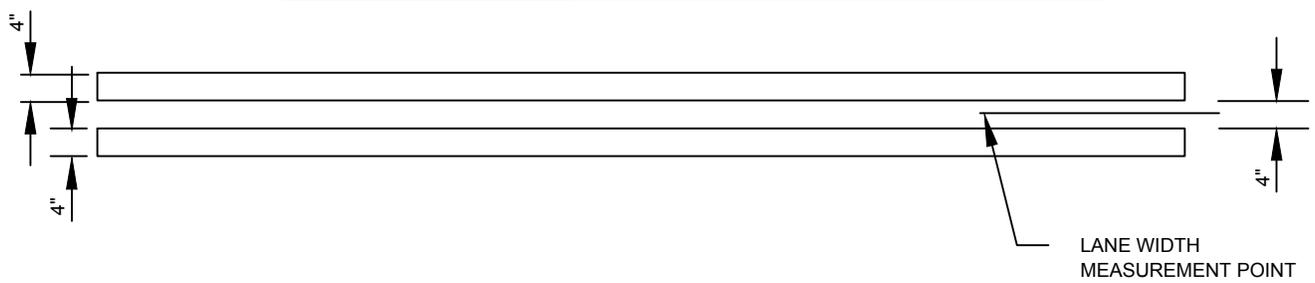
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SCALE	NONE
REVISION DATE	03/02
DEPARTMENT	PW



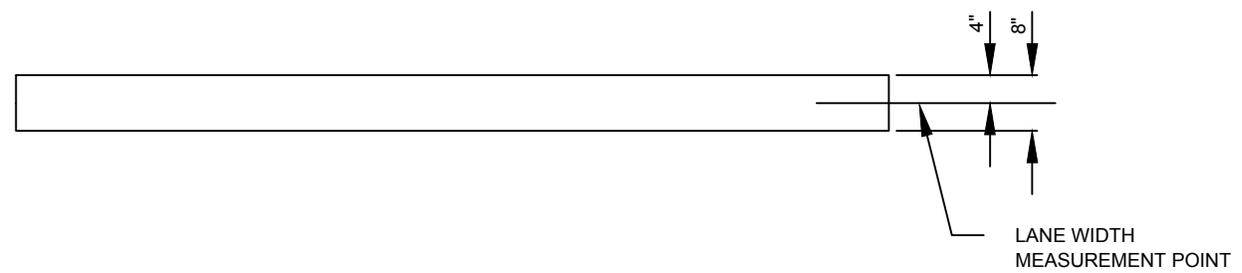
LANE STRIPE (WHITE)



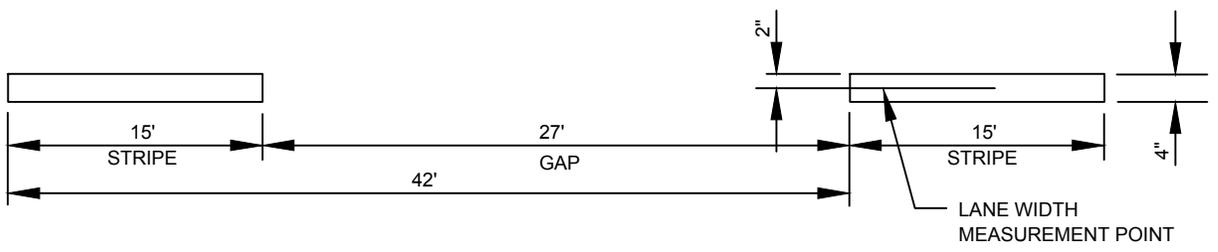
TWO WAY LEFT TURN STRIPE (YELLOW)



DOUBLE YELLOW CENTER STRIPE



GORE STRIPE (WHITE)

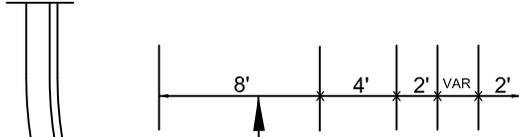


SKIP CENTER STRIPE (YELLOW)



PAINT STRIPING DETAILS

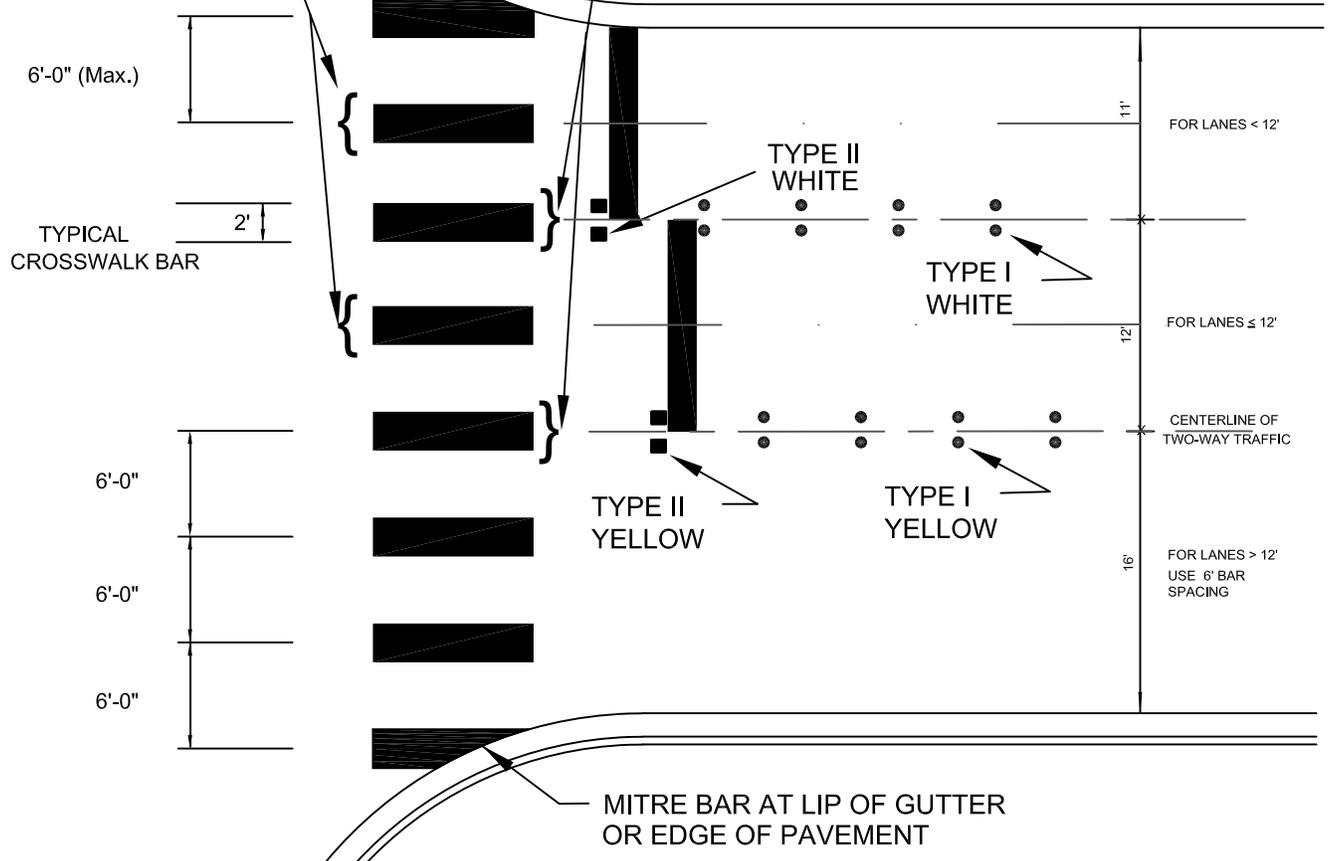
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SCALE	NONE
REVISION DATE	03/02
DEPARTMENT	PW



8' TYPICAL; SR99 10' TYPICAL

LOCATE IN CENTER OF LANE

LOCATE BARS ON CENTER OF LANE MARKINGS



NOTES:

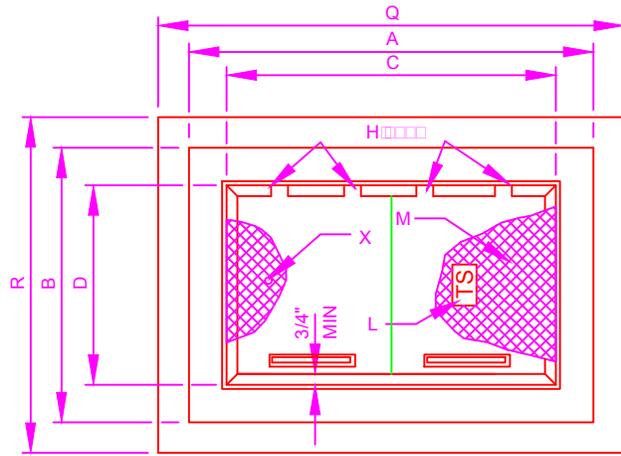
- 1 LAYOUT BARS BEGINNING AT CENTERLINE OF TWO-WAY TRAFFIC
- 2 120MIL WHITE THERMOPLASTIC WITH GLASS BEADS



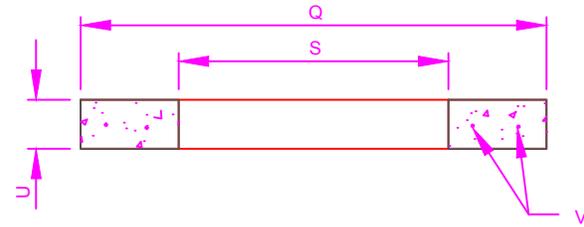
MULTIPLE LANE CROSSWALK LAYOUT

DRAWING NUMBER	STD7-20A
SCALE	NONE
REVISION DATE	11/18
DEPARTMENT	PW

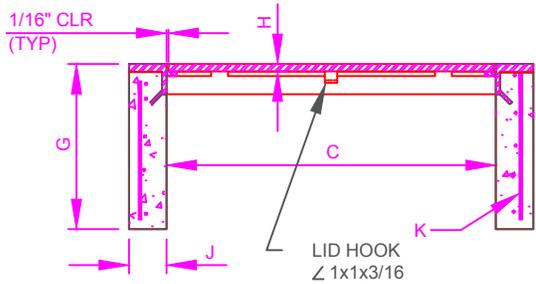
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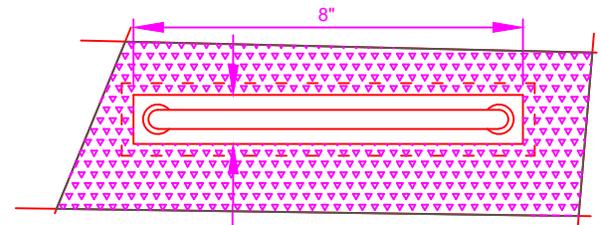
PLAN



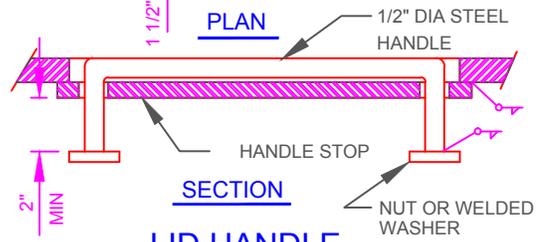
BASE SECTION



BOX SECTION



PLAN



SECTION

LID HANDLE

DIM.	ITEM	BOX TYPE		
		TYPE 1	TYPE 2	TYPE 3
A	BX OUTSIDE LENGTH	22"	33"	48"
B	BX OUTSIDE WIDTH	17"	22 1/2"	36"
C	BX INSIDE LENGTH	18"	28"	36"
D	BX INSIDE WIDTH	13"	17"	24"
E	LID LENGTH	17 7/8"	26 3/8"	SPLIT LID
F	LID WIDTH	12 7/8"	16 7/8"	25 7/8"
G	BX DEPTH	12"	12"	18"
H	LID THICKNESS	5/16"	5/16"	1/2"
J	WILL THICKNESS	1 1/2"	1 1/2"	3"
K	BX OR EXTEN WALL WIRE REINF	W-3	W-2.5	W-5
L	LEGEND	1"x1" LTRS	1"x1" LTRS	1"x1" LTRS
M	HANDLE	N/A	N/A	TWO
Q	FOUNDATION OUTSIDE LENGTH	N/A	N/A	48"
R	FOUNDATION OUTSIDE WIDTH	N/A	N/A	36"
S	FOUNDATION INSIDE LENGTH	N/A	N/A	36"
T	FOUNDATION INSIDE WIDTH	N/A	N/A	22"
U	FOUNDATION DEPTH	N/A	N/A	6"
V	FOUNDATION REINF.	N/A	N/A	2-W-5
W	BOX EXTENSION DEPTH	N/A	N/A	N/A
X	FINGER HOLE □/DIA	N/A	N/A	N/A
CAPACITY CONDUIT INCH DIAMETERS		6	12	24

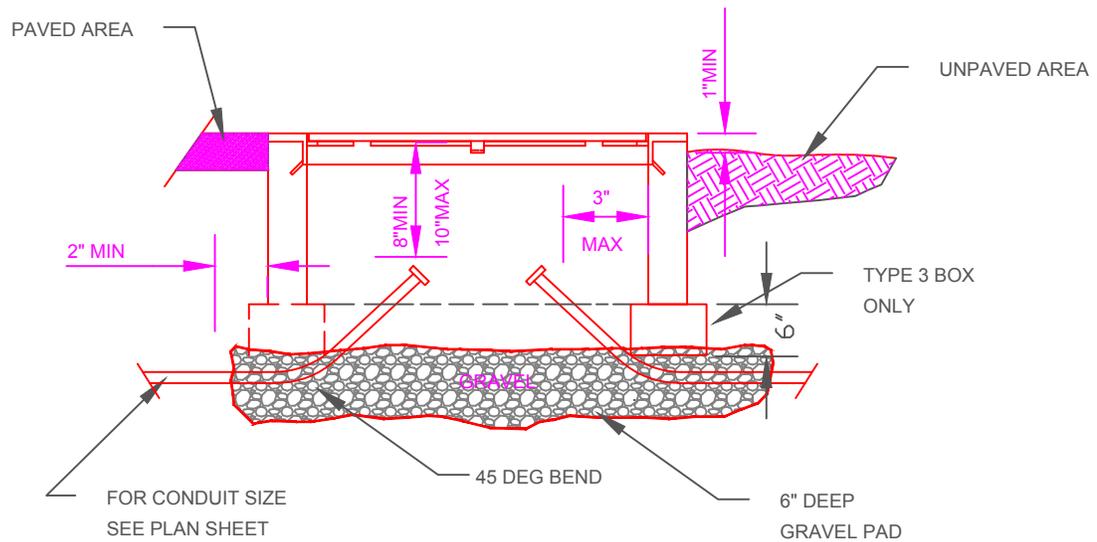
ITEM	MATERIAL
BOX	6000 PSI CONC
FRAME	FLAT OR DIA-MOND GALV STEEL A786
LID SUPPORT	1/8" MIN GALV STEEL C,L OR T, -A36
LID	DIAMOND GALV PLATE STEEL A786
ANCHORS	STEEL WIRE OR TEE PLATE
REINF	ASTM A-82 STEEL
HANDLE	GALV STEEL
FOUNDATION	3000 PSI CONC

FOR ADDITIONAL INFORMATION SEE STD DWG 805B



TRAFFIC JUNCTION BOX DETAILS

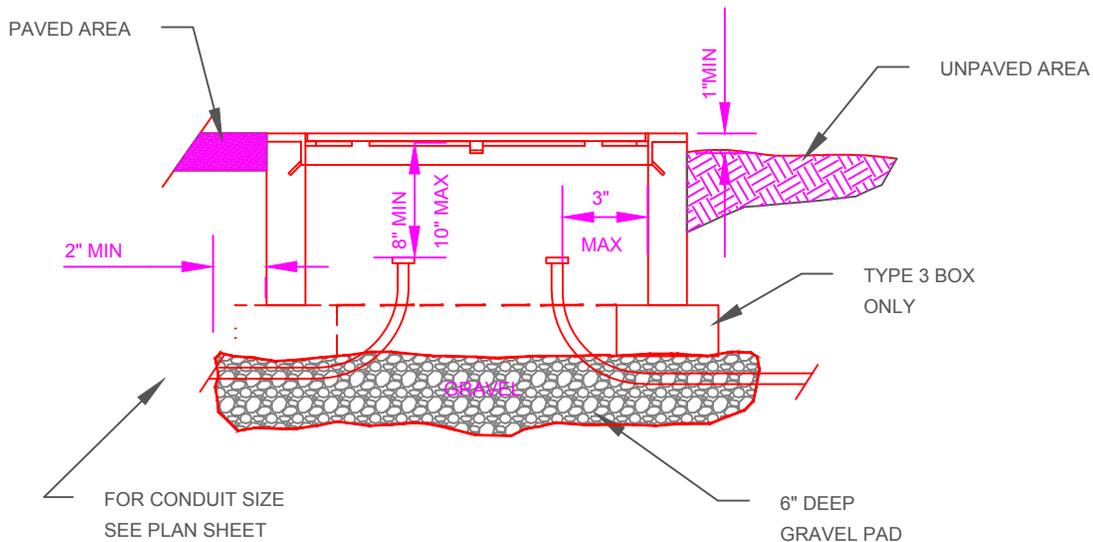
DRAWING NUMBER	STD8-3
SCALE	NONE
REVISION DATE	04/03
DEPARTMENT	PW



TYPICAL J-BOX INSTALLATION

NOTES:

- 1 ALL DIMENSIONS ARE MINIMUM. EXACT CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS.
- 2 THE NOTED LID THICKNESSES ARE OVERALL MINIMUMS. THE DIAMOND PATTERN FOR TYPE 1 OR TYPE 2 BOXES SHALL BE 28" MINIMUM OF OVERALL THICKNESS. THE DIAMOND PATTERN FOR TYPE 3 BOXES SHALL BE 3/32" MINIMUM THICK.
- 3 LID SUPPORT MEMBERS SHALL BE WELDED TO FRAME.
- 4 4000 PSI CONCRETE IS ALLOWED IF BOX REINFORCEMENT CONSISTS OF 6x6 - W3xW3 WELDED WIRE FABRIC WELDED TO THE FRAME.
- 5 WHEN NOTED IN THE CONTRACT TYPE 2 AND TYPE 3 BOXES SHALL BE PROVIDED WITH 12" DEEP EXTENSION BOXES.
- 6 WHEN NOTED IN THE CONTRACT TYPE 2 BOXES SHALL BE PROVIDED WITH A 10"x27 1/2" 10 GAGE DIVIDER PLATE COMPLETE WITH FASTENERS.
- 7 NON CONCRETE BOXES MAY BE SUBMITTED FOR APPROVAL EVALUATION WILL INCLUDE AN H-20 LOAD TEST.
- 8 ALL BOXES WILL BE WSDOT APPROVED AND CERTIFIED.
- 9 LEGEND FOR TRAFFIC SIGNAL SYSTEM BOXES WILL BE "TS", AND "LT" FOR ILLUMINATION SYSTEMS. LEGEND FOR COMMUNICATION OR FIBER SYSTEM BOXES WILL BE "COM". LEGEND LETTERS WILL BE FORMED WITH 1/8" WELD BEAD. GRIND OFF DIAMOND PATTERN BEFORE FORMING LETTERS.

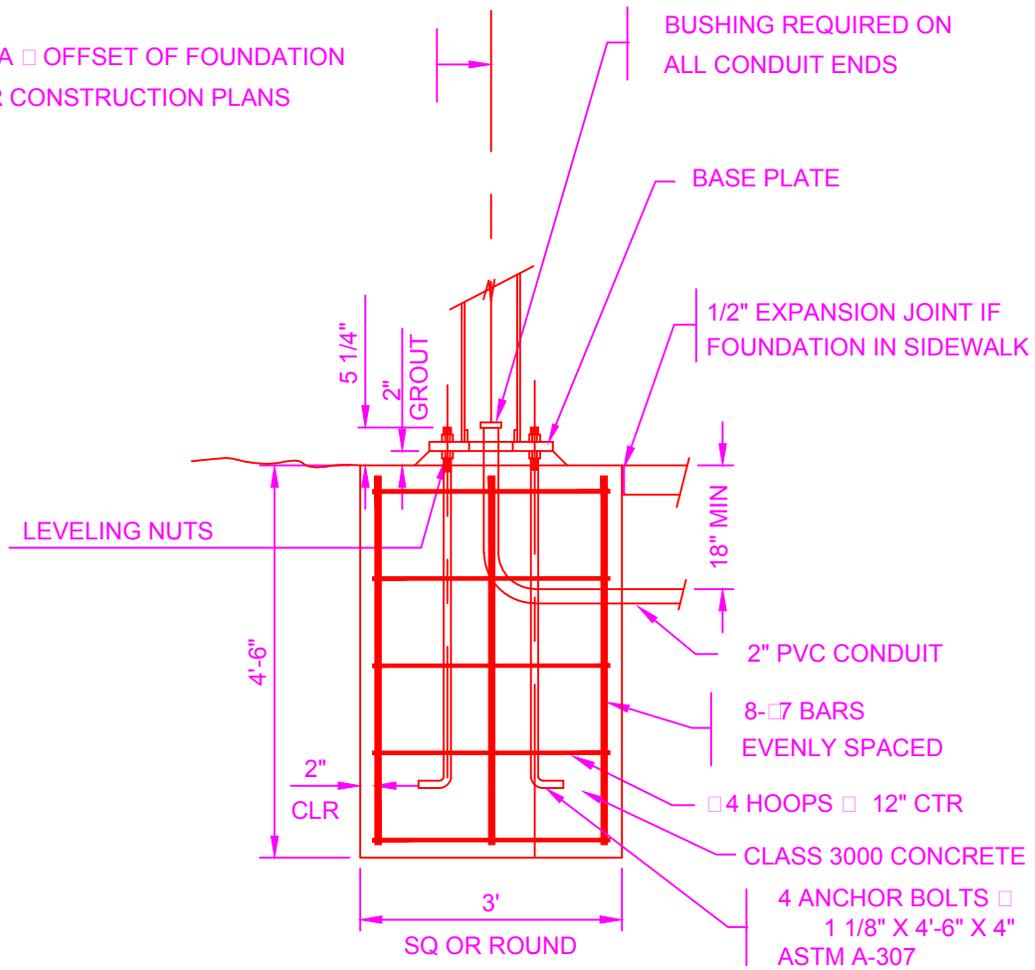


TYP J-BOX INSTALLATION

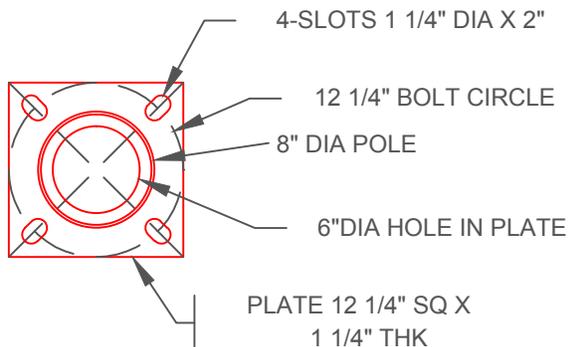
NOTES:

- 1 ALL DIMENSIONS ARE MINIMUM. EXACT CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS.
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- 8 ALL BOXES WILL BE WSDOT APPROVED AND CERTIFIED.
- 9 LEGEND FOR TRAFFIC SIGNAL SYSTEM BOXES WILL BE "TS", AND "LT" FOR ILLUMINATION SYSTEMS. LEGEND FOR COMMUNICATIONS OR FIBER SYSTEM BOXES WILL BE "COM". LEGEND LETTERS WILL BE FORMED WITH 1/8" WELD BEAD. GRIND OFF DIAMOND PATTERN BEFORE FORMING LETTERS.

STA □ OFFSET OF FOUNDATION
PER CONSTRUCTION PLANS



FOUNDATION SECTION

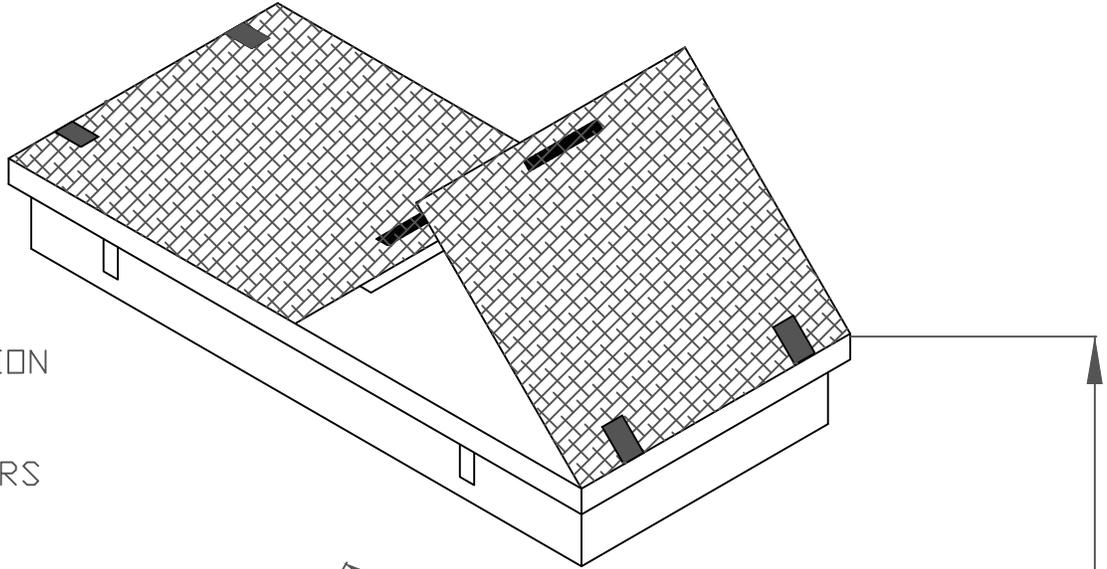


NOTES:

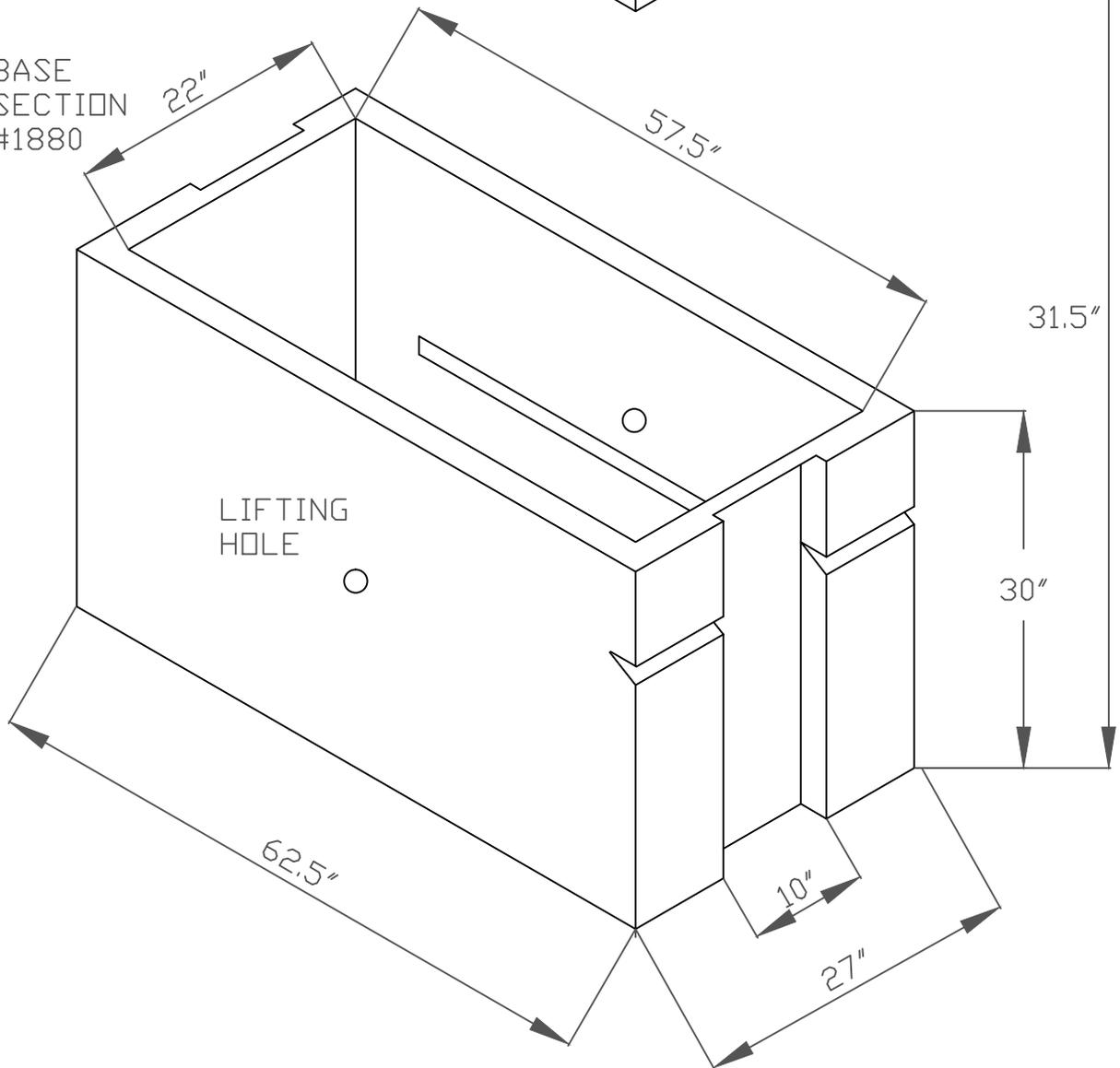
- 1 THE TOP 12" OF ANCHOR BOLTS WILL BE GALVANIZED PER AASHTO M 111.

DRAWING NUMBER	STD8-8
SCALE	NONE
REVISION DATE	03/02
DEPARTMENT	PW

TOP SECTION WITH TWO COVERS #251

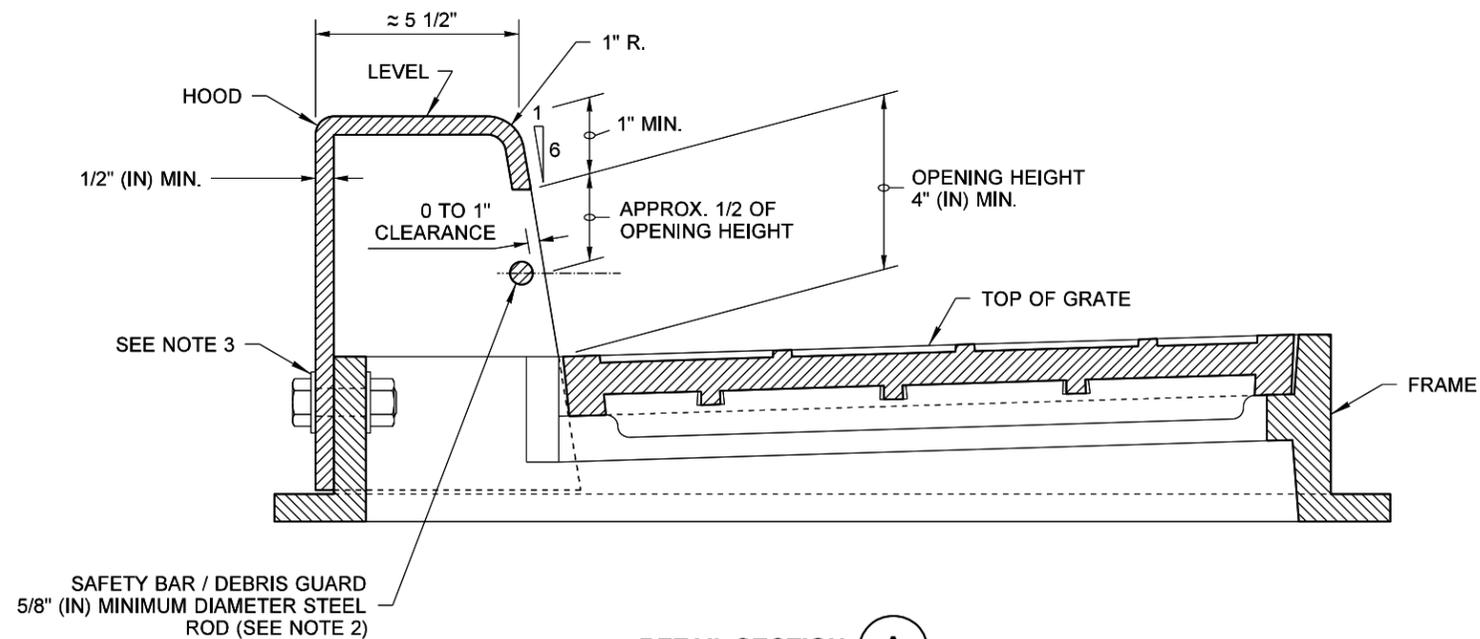


BASE SECTION #1880



DRAWING NUMBER	STD8-30
SCALE	NONE
REVISION DATE	06/30
DEPARTMENT	PW

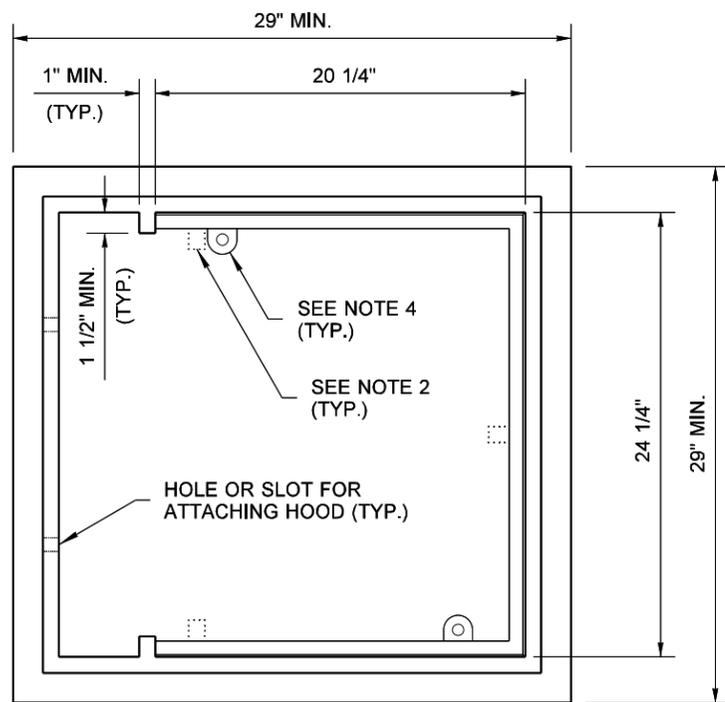
DRAWN BY: FERN LIDDELL



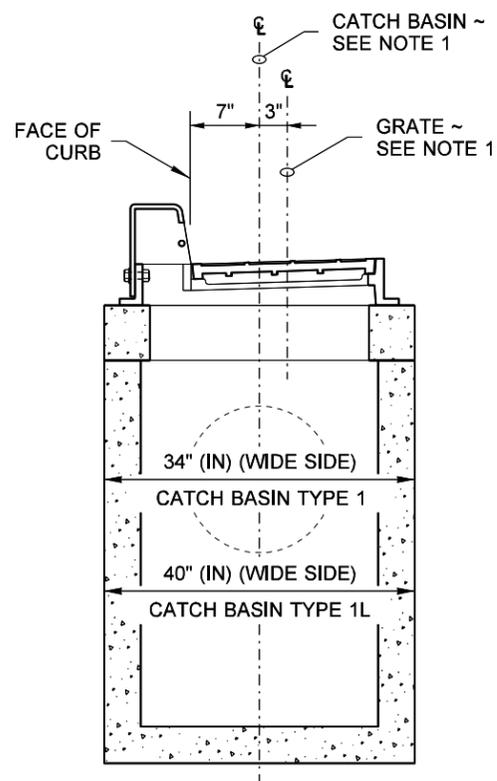
DETAIL SECTION A

NOTES

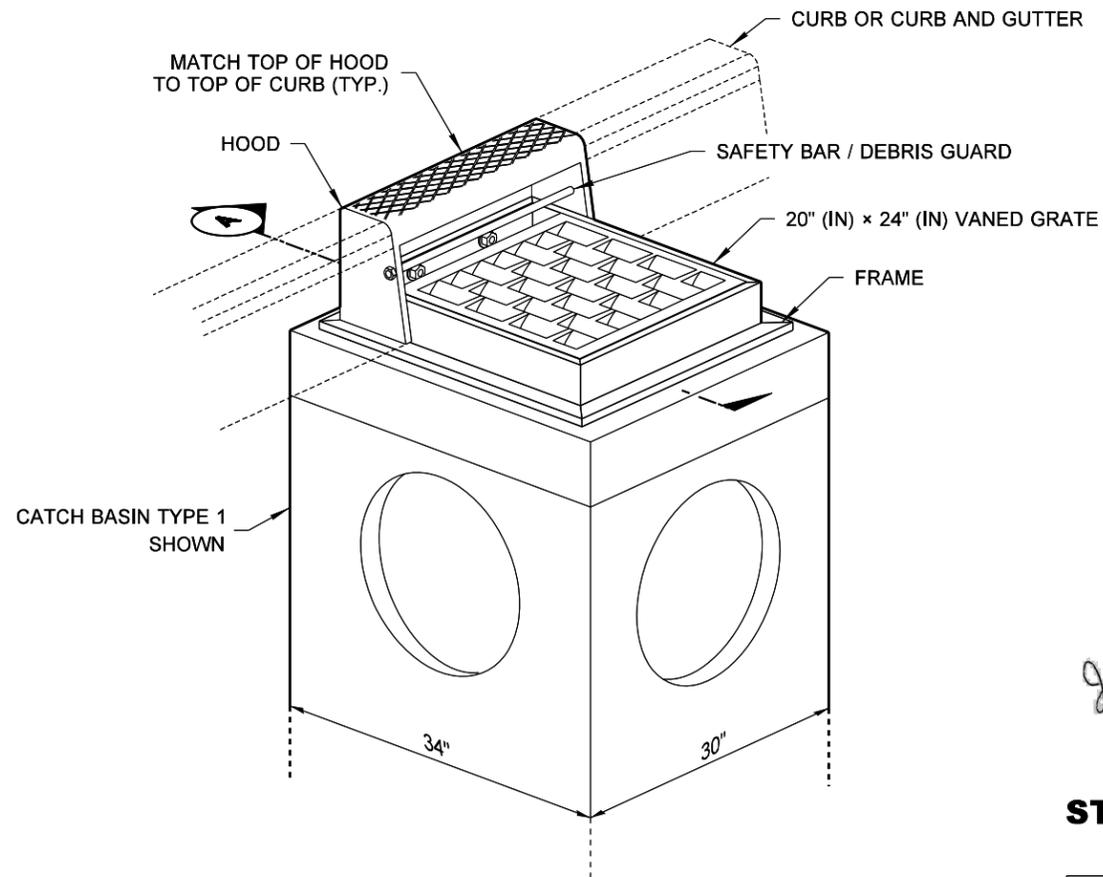
1. This inlet requires the precast catch basin unit to be rotated 90 degrees so that the narrow side is parallel to the curb line. When calculating offsets from curb to centerline (CL) of the precast catch basin, please note that the CL of the grate is not the CL of the precast catch basin. See **Section A**.
2. The dimensions of the frame and hood may vary slightly among different manufacturers. The Frame may have cast features intended to support a debris guard. Hood units may be mounted inside or outside of the frame. The methods for fastening the safety bar / debris guard rod to the hood may vary. The hood may include casting lugs. The top of the hood may be cast with a pattern.
3. Attach the hood to the frame with two 3/4" (in) x 2" (in) hex head bolts, nuts, and oversize washers. The washers shall have diameters adequate to ensure full bearing across the slots.
4. Bolt-down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide two holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer. See **BOLT-DOWN DETAIL, Standard Plan B-30.10**.
5. Only ductile iron Vaned Grates shall be used. See **Standard Plans B-30.30 and B-30.40** for grate details. Refer to **Standard Specification Section 9-05.15(2)** for additional requirements.
6. This plan is intended to show the installation details of a manufactured product. This plan is not intended to show the specific details necessary to fabricate the castings depicted in this drawing.



**TOP VIEW
FRAME DETAIL**



SECTION A



**ISOMETRIC VIEW
COMBINATION INLET
FRAME, HOOD, AND VANED GRATE**



Heilman, Julie
Feb 20 2018 12:51 PM
cosign

COMBINATION INLET

STANDARD PLAN B-25.20-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Carpenter, Jeff
Feb 27 2018 7:43 AM
cosign

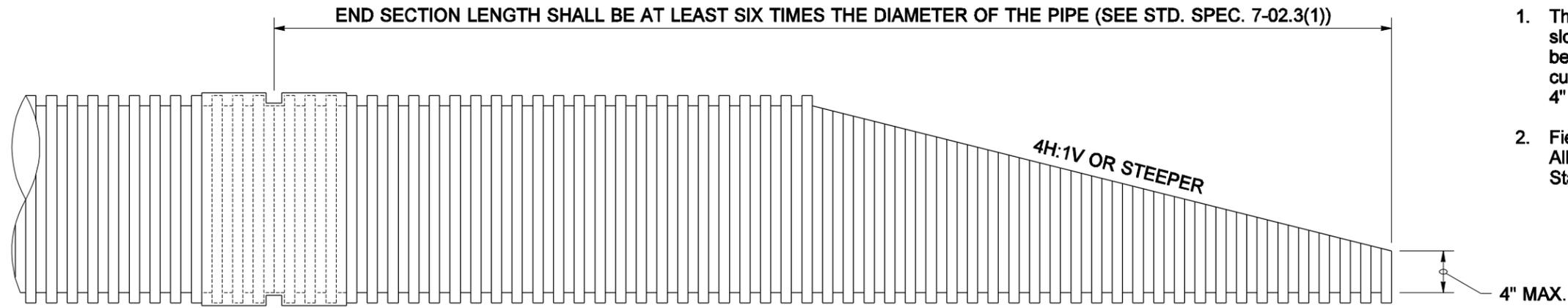
STATE DESIGN ENGINEER



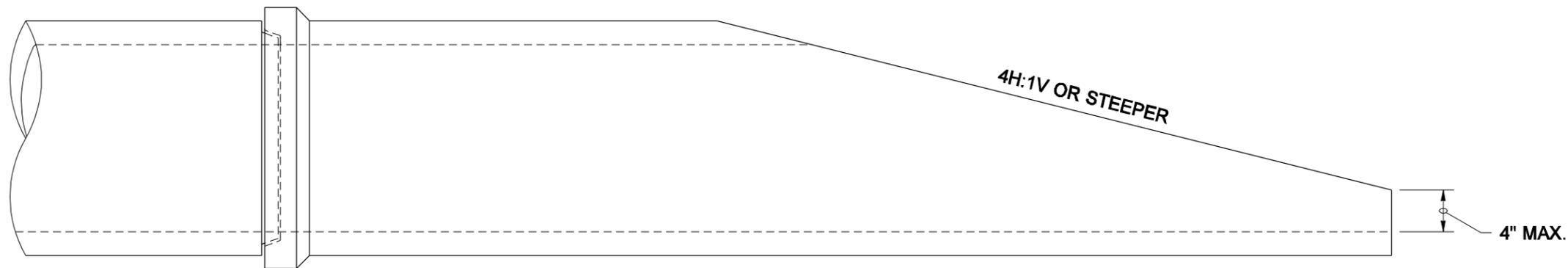
Washington State Department of Transportation

NOTES

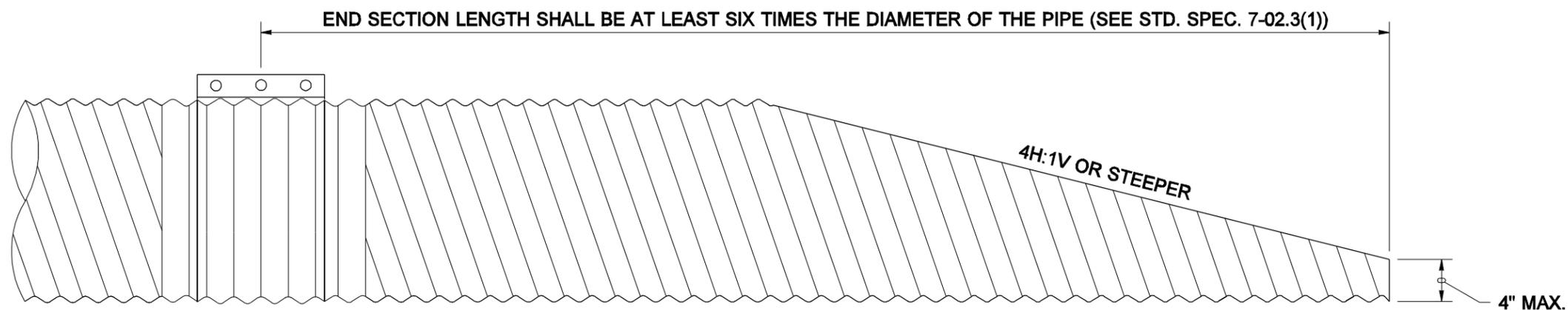
1. The culvert ends shall be beveled to match the embankment or ditch slope and shall not be beveled flatter than 4H:1V. When slopes are between 4H:1V and 6H:1V, shape the slope in the vicinity of the culvert end to ensure that no part of the culvert protrudes more than 4" above the ground line.
2. Field cutting of culvert ends is permitted when approved by the Engineer. All field-cut culvert pipe shall be treated with treatment as shown in the Standard Specifications or General Special Provisions.



THERMOPLASTIC PIPE



CONCRETE PIPE



METAL PIPE

FOR CULVERTS 30" DIAMETER OR LESS



EXPIRES JULY 1, 2007

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

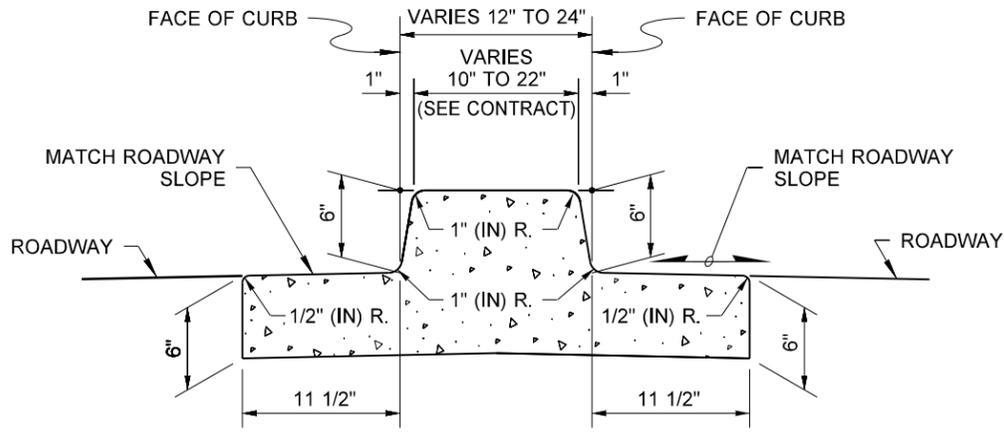
BEVELED END SECTIONS
STANDARD PLAN B-70.20-00
 SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

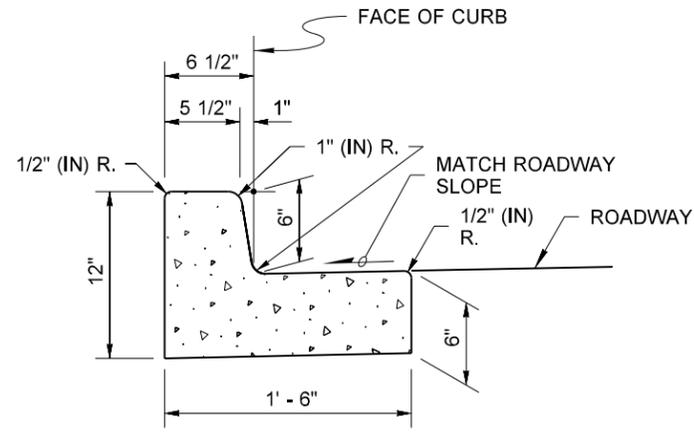
Harold J. Peterfeso 06-01-06
 STATE DESIGN ENGINEER DATE



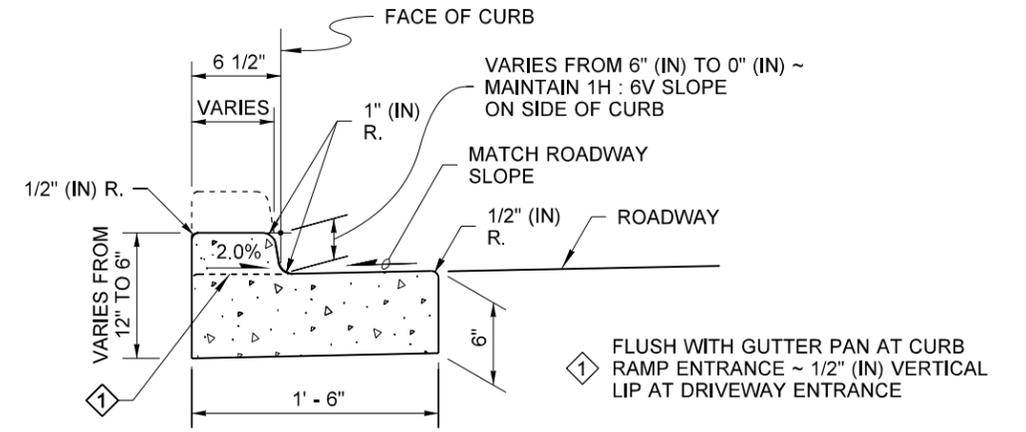
DRAWN BY: FERN LIDDELL



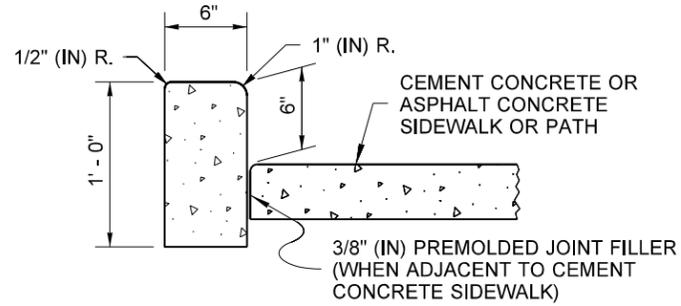
DUAL-FACED CEMENT CONCRETE TRAFFIC CURB AND GUTTER



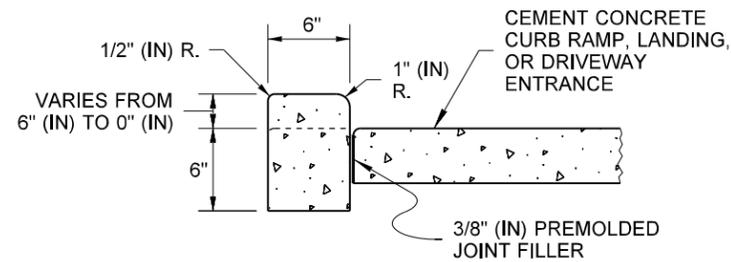
CEMENT CONCRETE TRAFFIC CURB AND GUTTER



DEPRESSED CURB AND GUTTER SECTION AT CURB RAMPS AND DRIVEWAY ENTRANCES



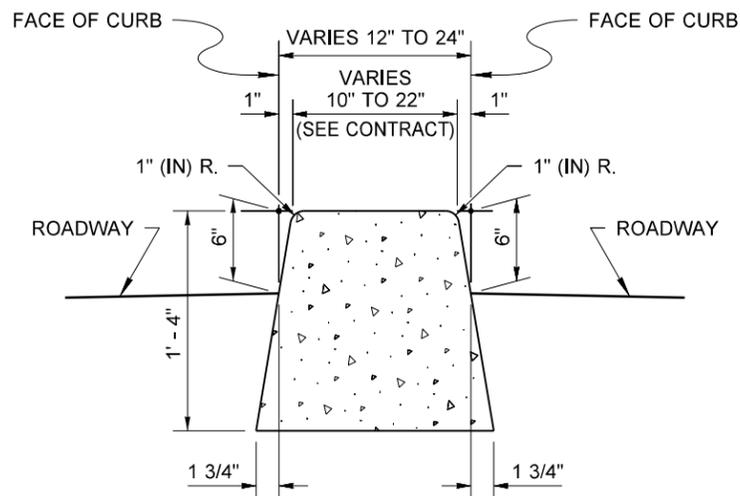
CEMENT CONCRETE PEDESTRIAN CURB



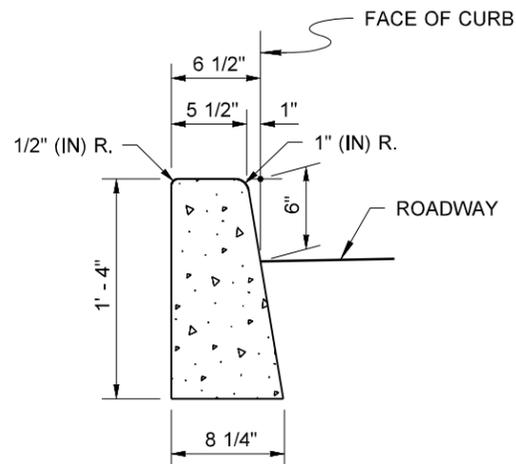
CEMENT CONCRETE PEDESTRIAN CURB AT CURB RAMPS, LANDINGS, AND DRIVEWAY ENTRANCES

NOTE

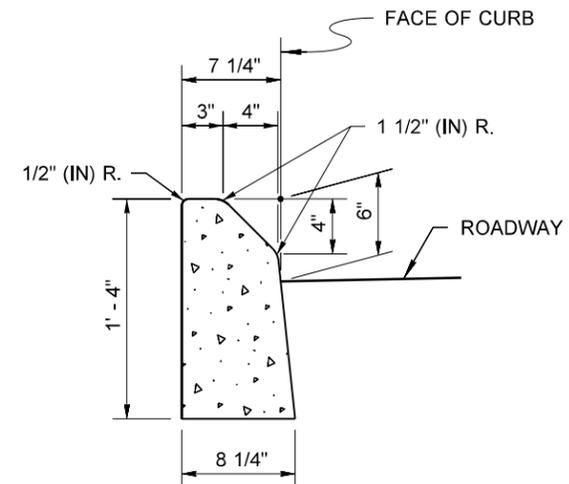
1. See **Standard Plan F-30.10** for Curb Expansion and Contraction Joint spacing. See **Standard Specification, Sections 8-04 and 9-04** for additional requirements.



DUAL-FACED CEMENT CONCRETE TRAFFIC CURB



CEMENT CONCRETE TRAFFIC CURB



MOUNTABLE CEMENT CONCRETE TRAFFIC CURB

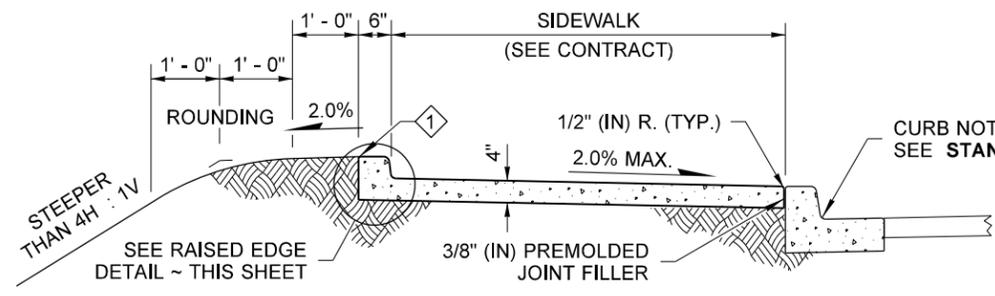


Michael S Fleming
 Digitally signed by Michael S Fleming
 Date: 2020.09.24 07:39:38 -07'00'
CEMENT CONCRETE CURBS

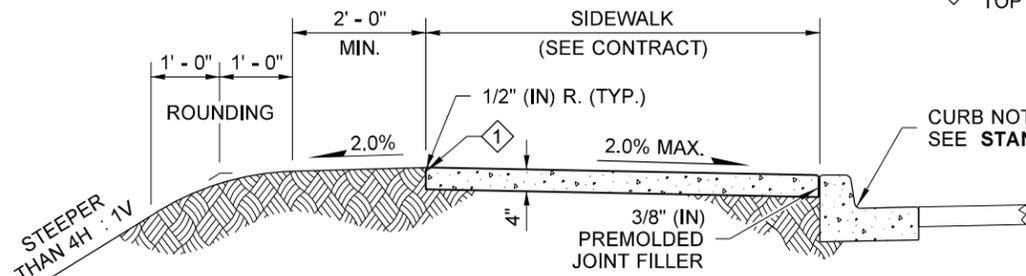
STANDARD PLAN F-10.12-04

SHEET 1 OF 1 SHEET

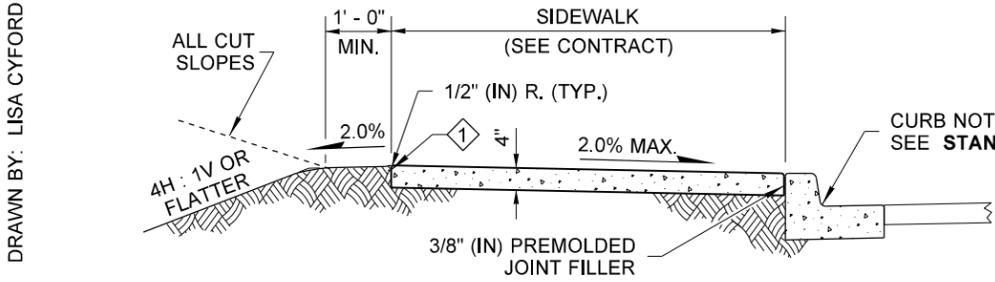
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 STATE DESIGN ENGINEER
 Washington State Department of Transportation



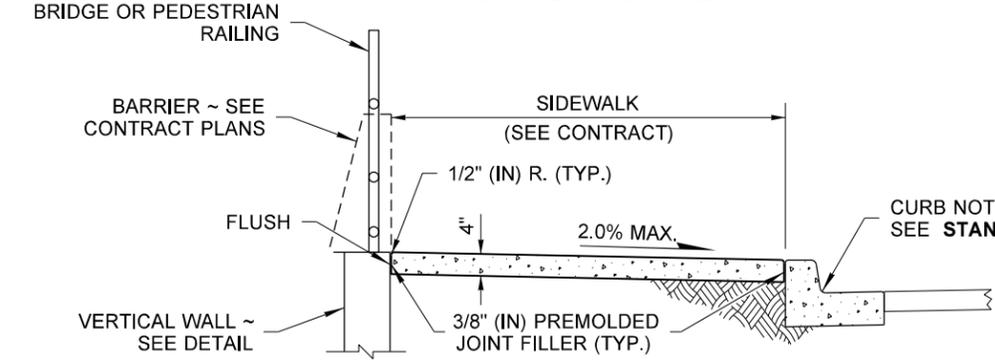
WITH RAISED EDGE



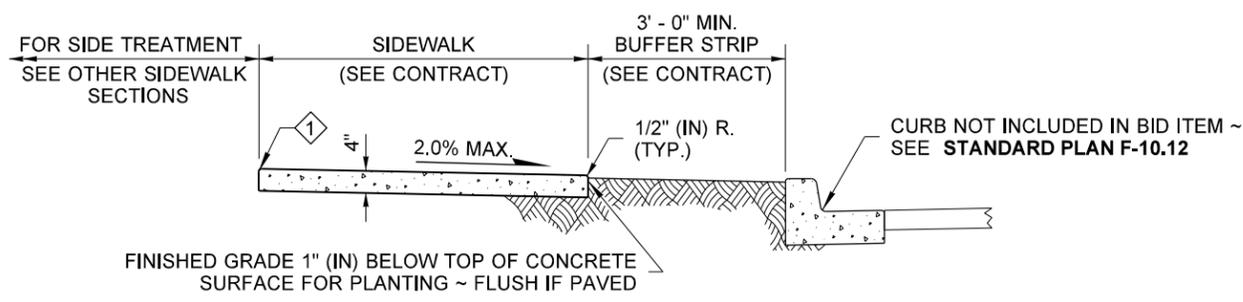
**ADJACENT TO CURB
(STEEP FILL SLOPES)**



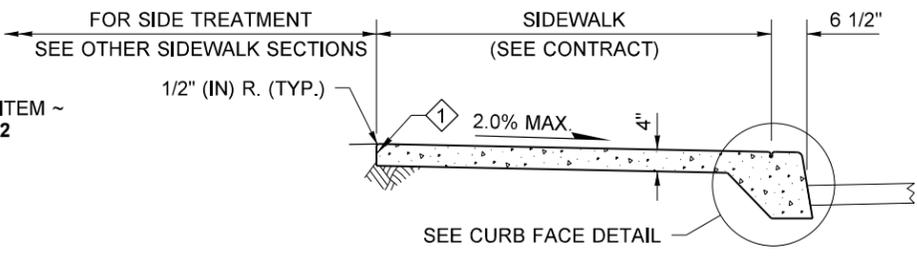
**ADJACENT TO CURB
(ALL CUT SLOPES)**



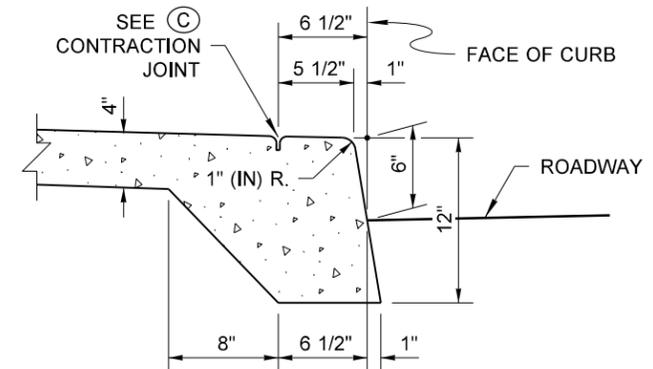
ADJACENT TO CURB AND RAILING OR WALL



ADJACENT TO BUFFER STRIP



**MONOLITHIC CEMENT CONCRETE
CURB AND SIDEWALK**

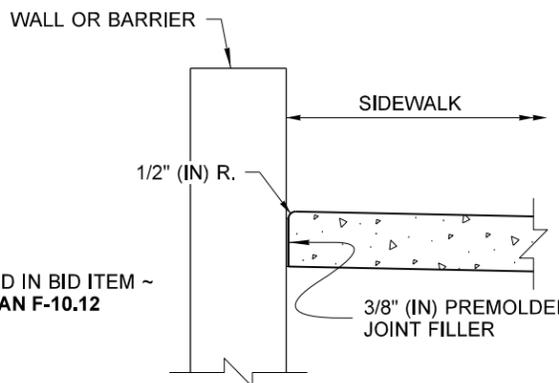


CURB FACE DETAIL

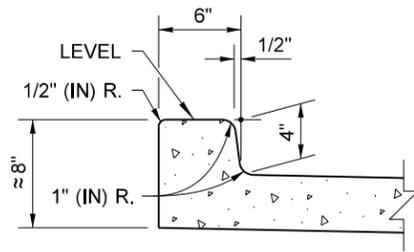
EXTEND SIDEWALK TRANSVERSE EXPANSION JOINTS TO INCLUDE CURB (FULL DEPTH)

NOTE

1. Gratings, Access Covers, Junction Boxes, Cable Vaults, Pull Boxes and other appurtenances within the sidewalk must have slip resistant surfaces, be flush with surface, and match grade of the sidewalk.

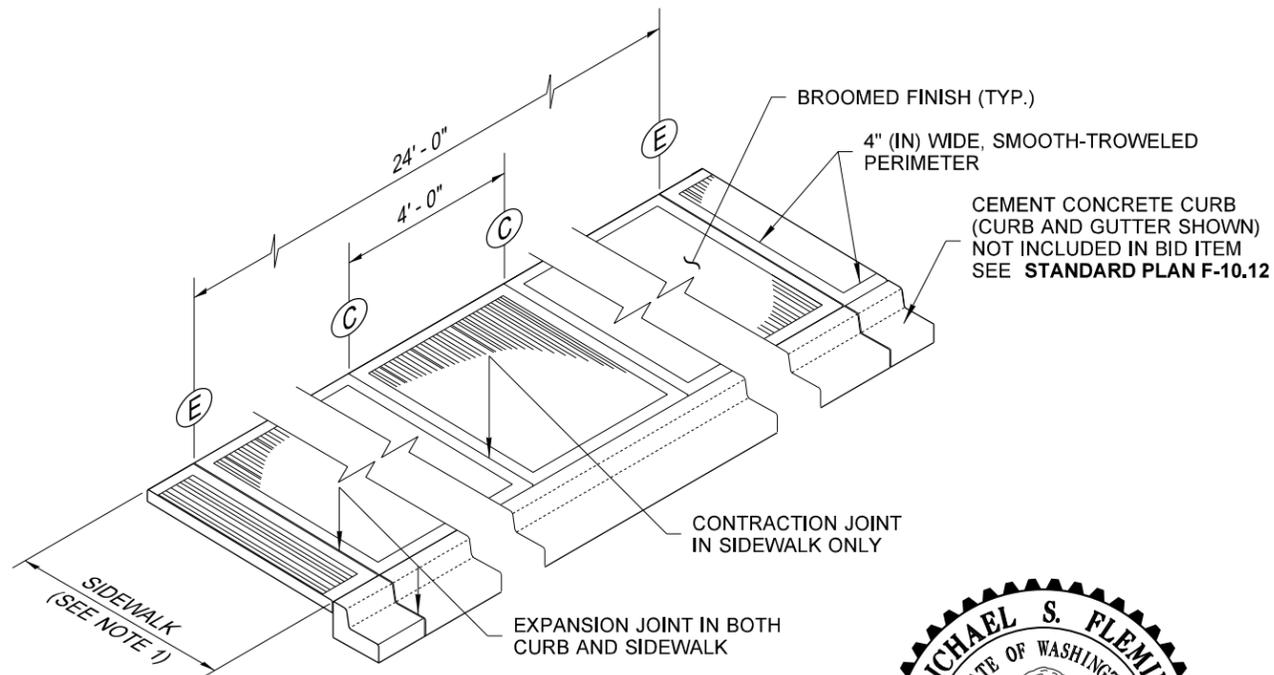


SIDEWALK ADJACENT TO WALL DETAIL

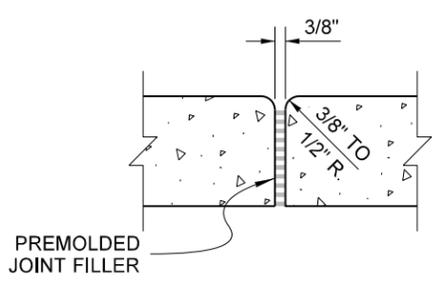


RAISED EDGE DETAIL

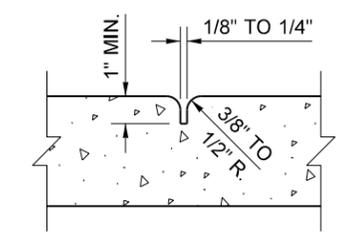
EXTEND SIDEWALK TRANSVERSE JOINTS TO INCLUDE RAISED EDGE



**ISOMETRIC VIEW
JOINT AND FINISH
DETAIL**



(E) EXPANSION JOINT



(C) CONTRACTION JOINT



Michael S. Fleming
Digitally signed by Michael S. Fleming
Date: 2020.09.24 07:40:16 -07'00'

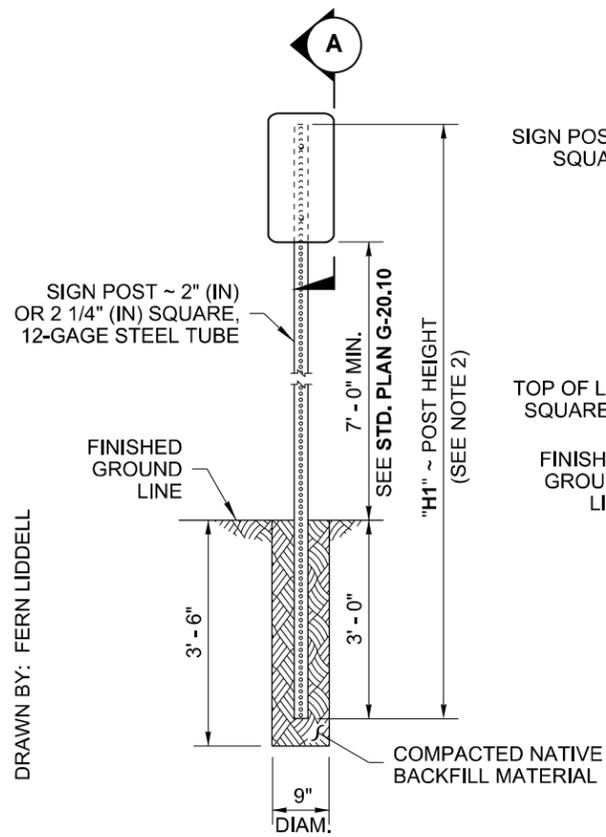
**CEMENT CONCRETE
SIDEWALK
STANDARD PLAN F-30.10-04**

SHEET 1 OF 1 SHEET

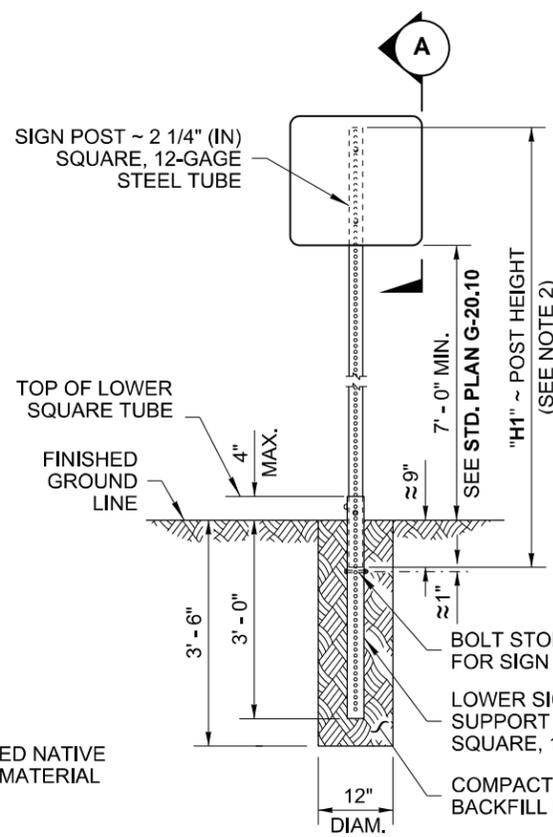
APPROVED FOR PUBLICATION
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STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: LISA CYFORD

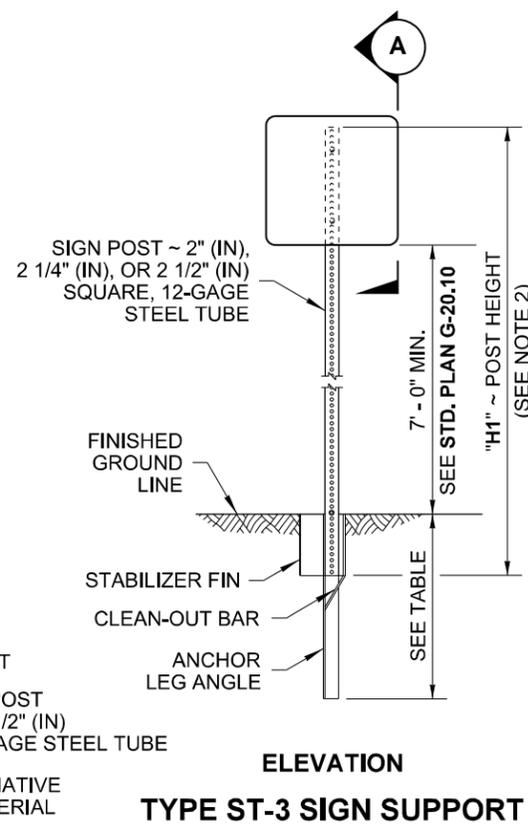
DRAWN BY: FERN LIDDELL



**ELEVATION
TYPE ST-1 SIGN SUPPORT**

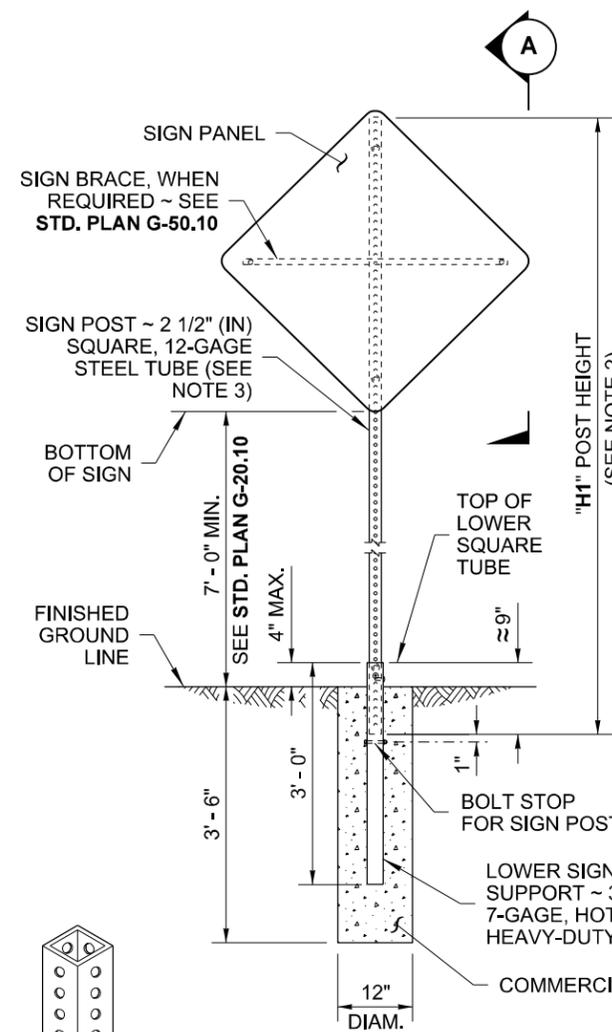


**ELEVATION
TYPE ST-2 SIGN SUPPORT**



**ELEVATION
TYPE ST-3 SIGN SUPPORT**

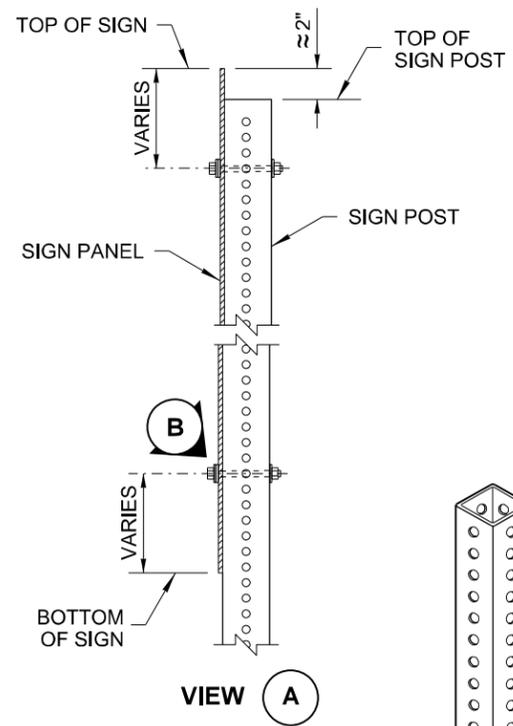
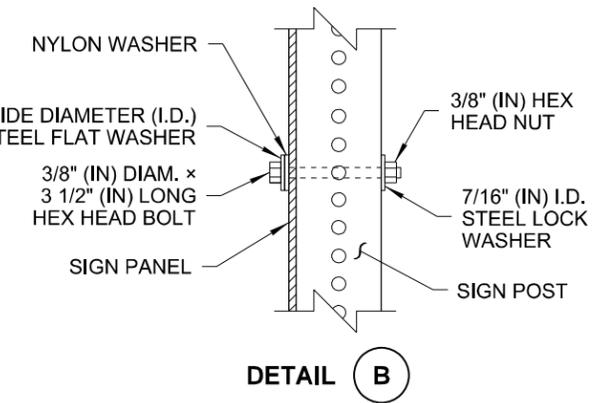
BURIED DEPTH	POST SIZE
2' - 6"	2", 2 1/4"
3' - 0"	2 1/2"



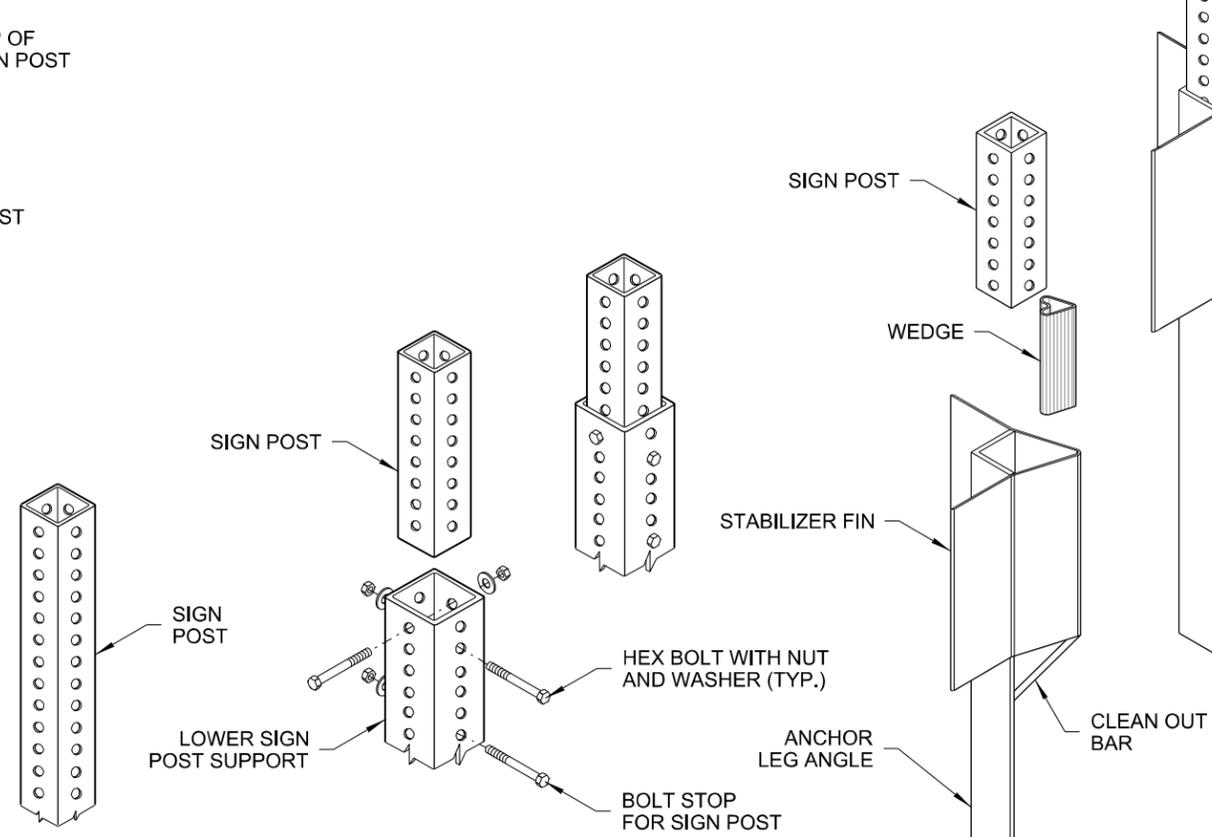
**ELEVATION
TYPE ST-4 SIGN SUPPORT**

NOTES

- Dimensions for the parts used to assemble the base connections are intentionally not shown. Base connections are patented, manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are shown on this plan only to illustrate how the parts are assembled.
- For "H1", refer to the Sign Specification Sheet in the Contract.
- A 2" (in) post with a 2 1/4" (in) PSST anchor or a 2 1/4" (in) post with a 2 1/2" (in) PSST anchor may be substituted. See Contract Plans.
- Perforated square steel post shall meet the requirements of **Standard Specification, Section 9-06**.
- Use only base connection manufacturer supplied hardware that meets the requirements of **Standard Specification, Sections 9-06 and 9-28**.



VIEW A



TYPE ST-1

TYPE ST-2

TYPE ST-3

TYPE ST-4

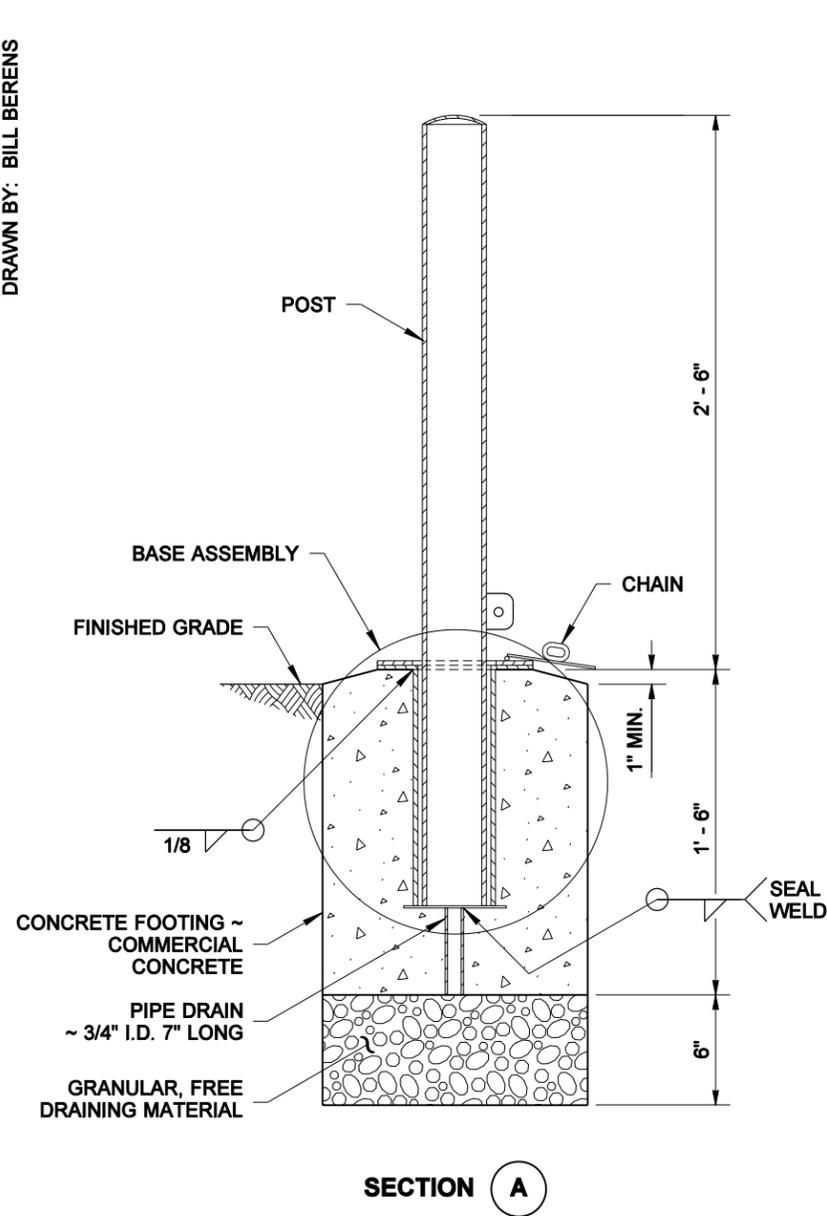


**STEEL SIGN SUPPORT
TYPES ST-1 - ST-4
INSTALLATION DETAILS
STANDARD PLAN G-24.50-05**

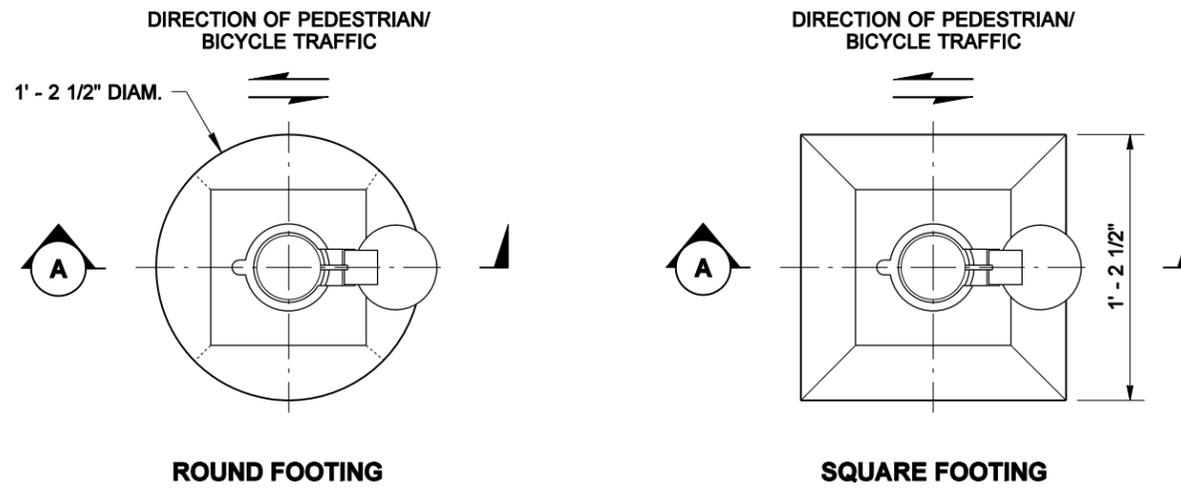
SHEET 1 OF 1 SHEET

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 Roark, Steve
 Aug 7 2019 11:54 AM
 STATE DESIGN ENGINEER
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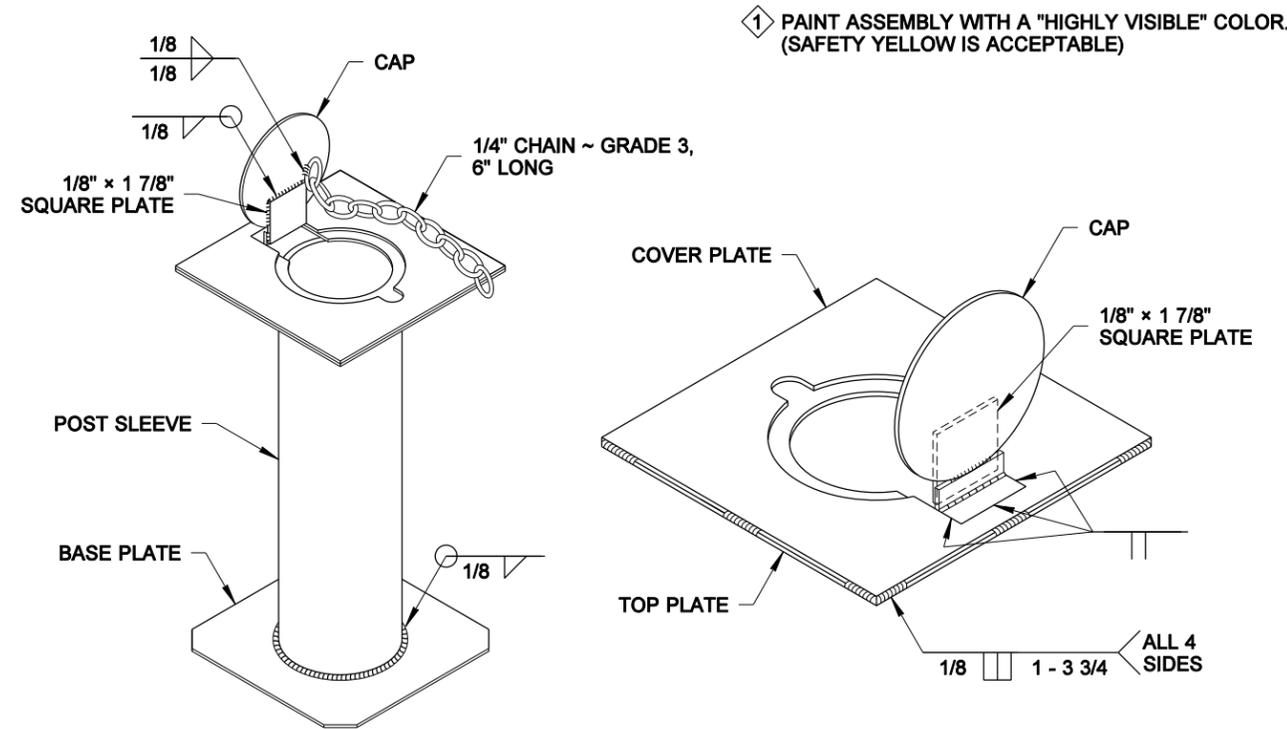
DRAWN BY: BILL BERENS



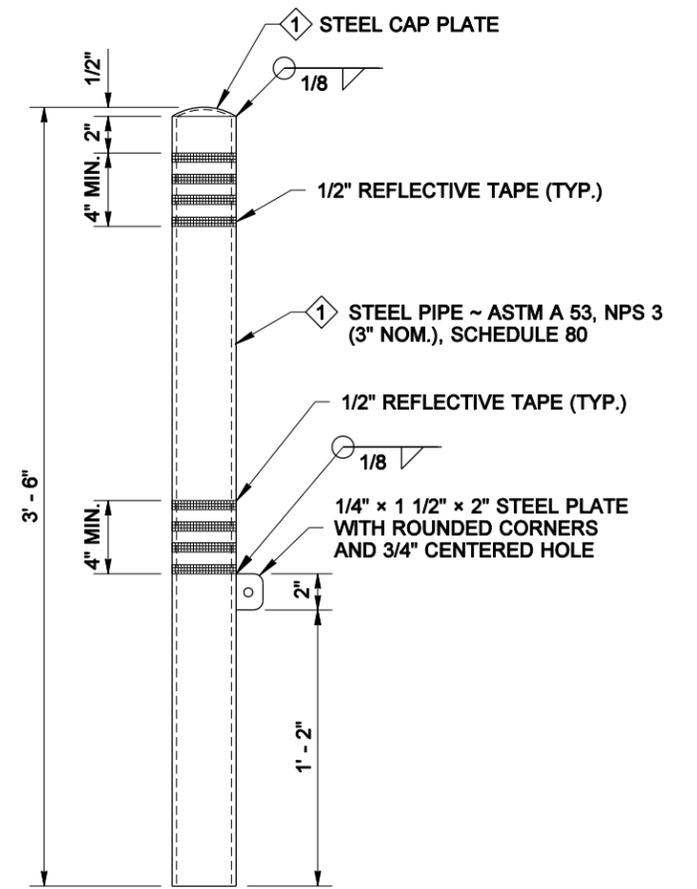
SECTION A



PLAN VIEW



BASE ASSEMBLY



POST

NOTE

This bollard does not have an effective breakaway design feature and cannot be installed within the Design Clear Zone.



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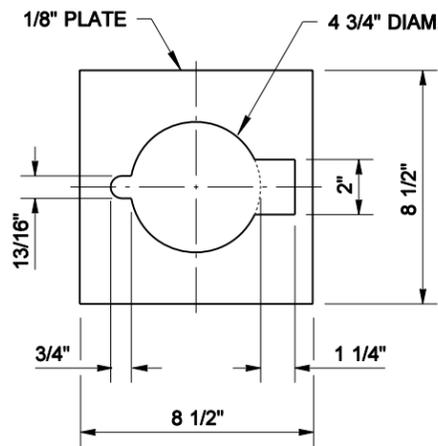
BOLLARD TYPE 1

STANDARD PLAN H-60.10-01

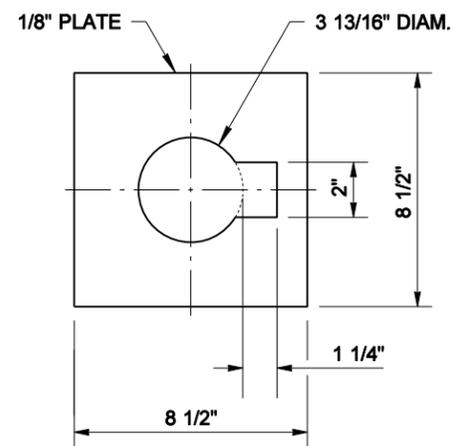
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

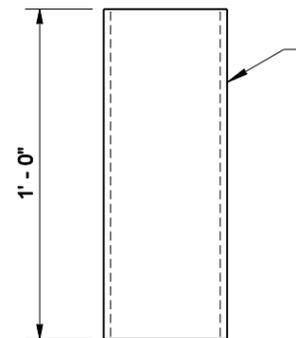
Pasco Bakotich III 07-03-08
STATE DESIGN ENGINEER DATE



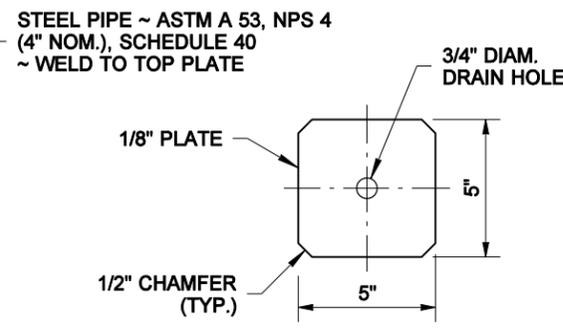
COVER PLATE



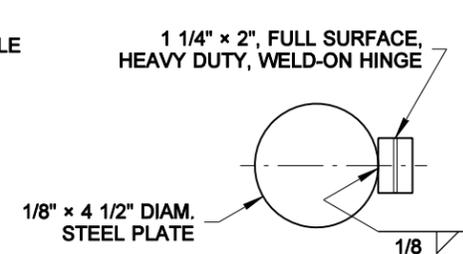
TOP PLATE



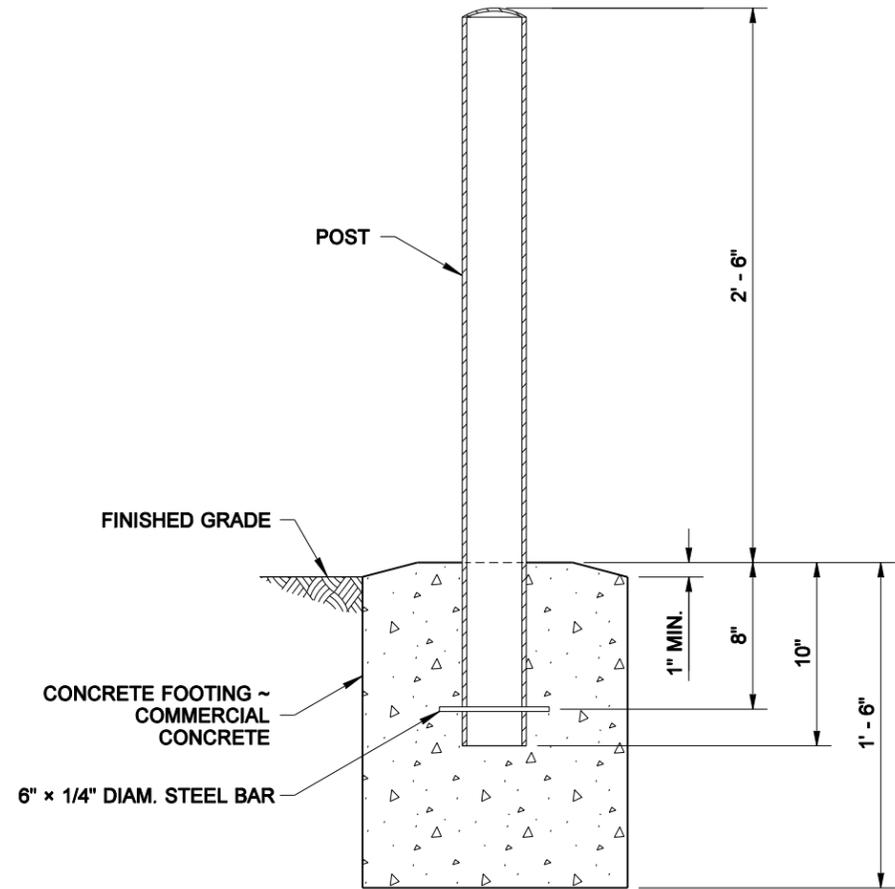
POST SLEEVE



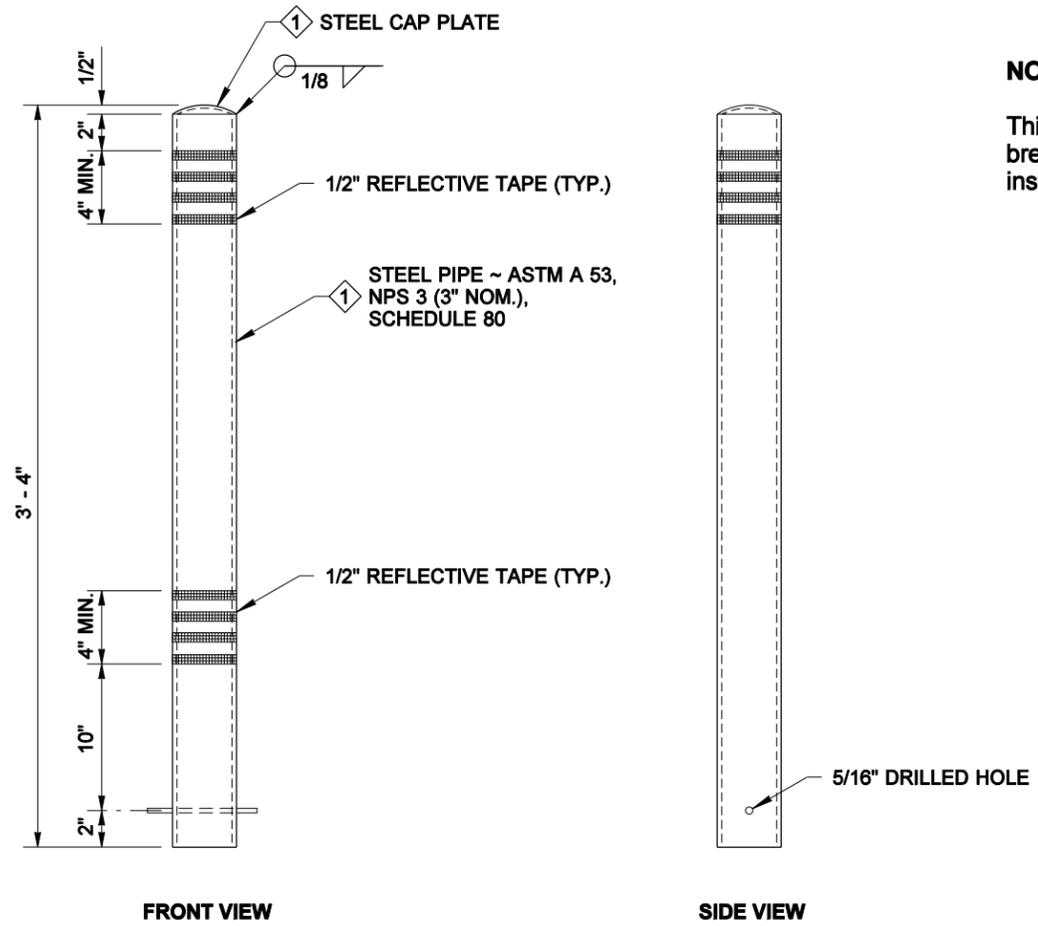
BASE PLATE



CAP AND HINGE



SECTION A



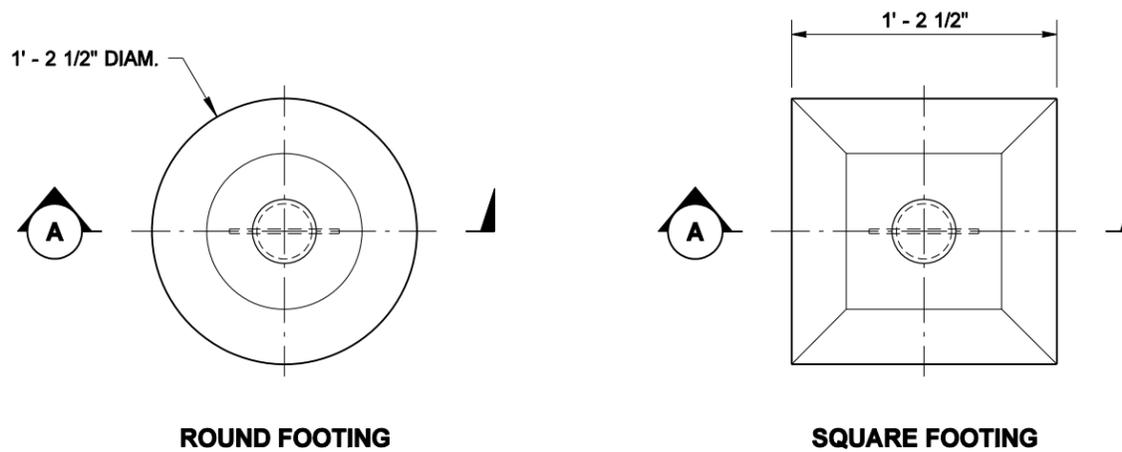
FRONT VIEW

SIDE VIEW

1 PAINT ASSEMBLY WITH A "HIGHLY VISIBLE" COLOR. (SAFETY YELLOW IS ACCEPTABLE)

POST

NOTE
This bollard does not have an effective breakaway design feature and cannot be installed within the Design Clear Zone.



ROUND FOOTING

SQUARE FOOTING

PLAN VIEW



EXPIRES JUNE 19, 2010

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BOLLARD TYPE 2

STANDARD PLAN H-60.20-01

SHEET 1 OF 1 SHEET

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Pasco Bakotich III 07-03-08

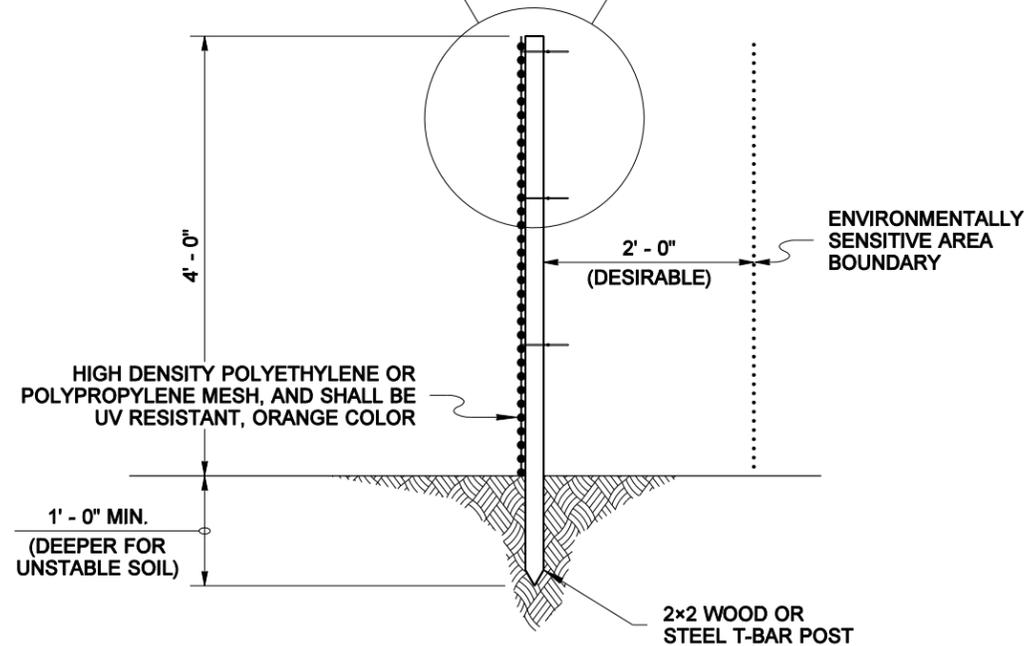
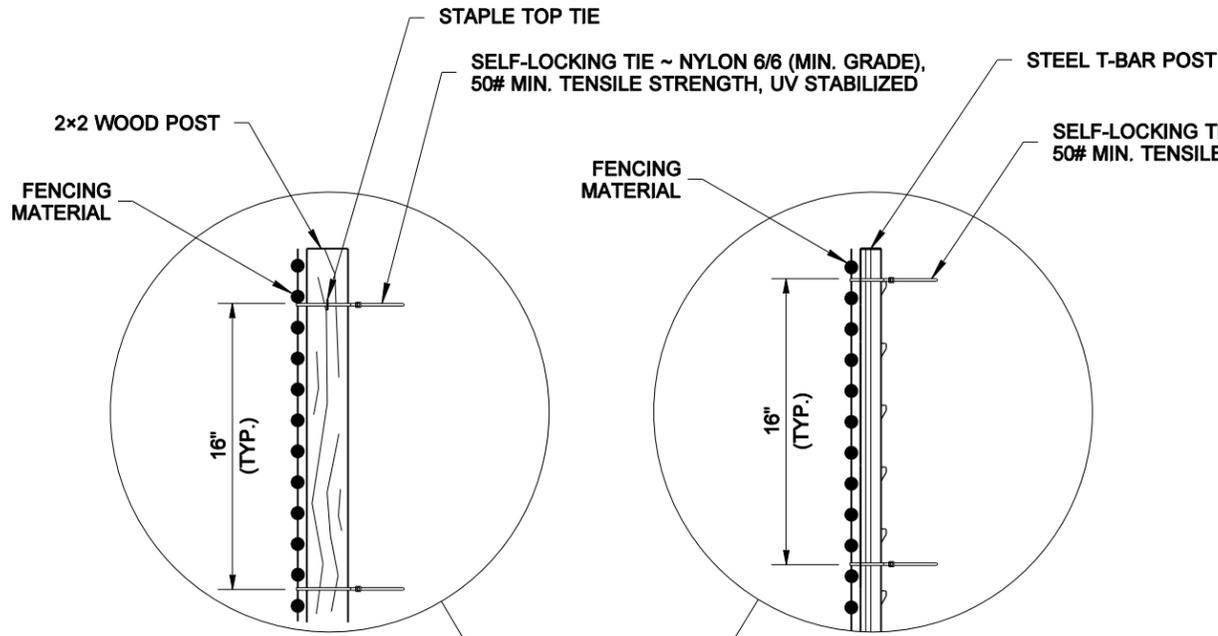
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DATE

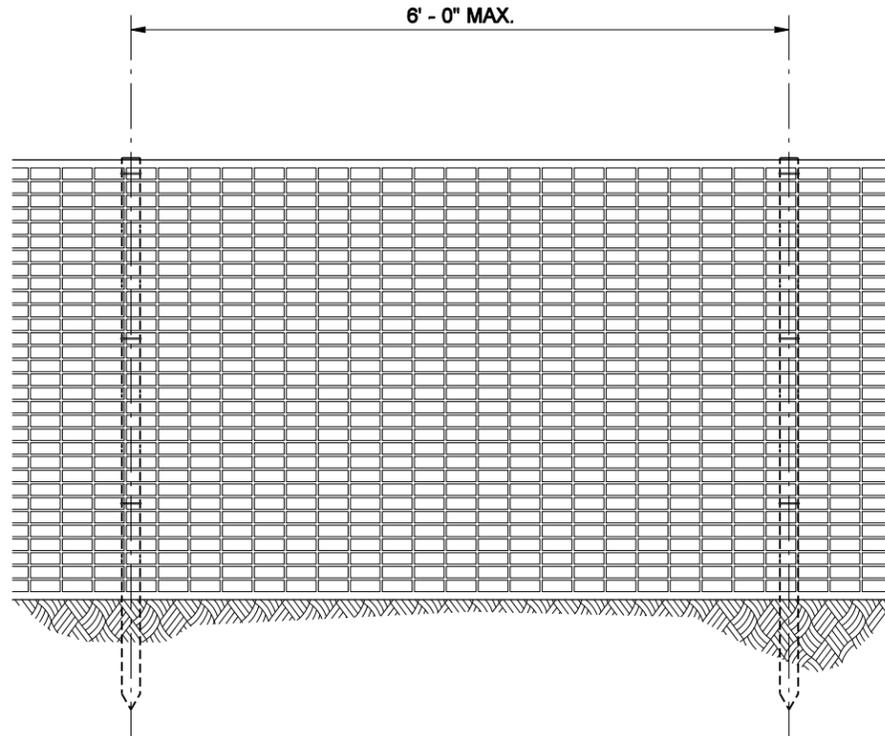


Washington State Department of Transportation

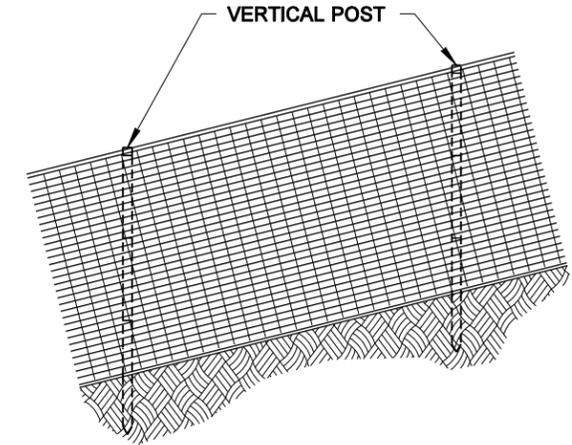
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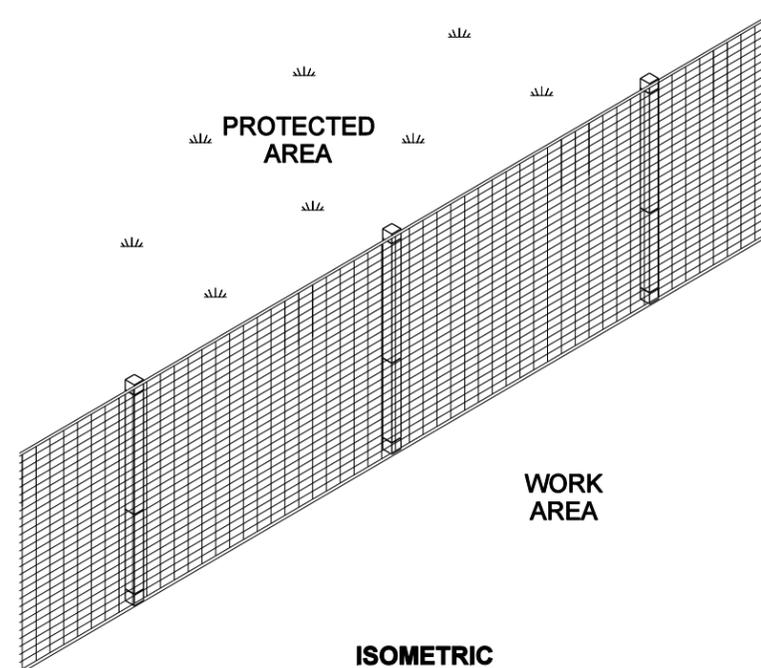
TYPICAL SECTION



ELEVATION



ELEVATION
FENCE ON SLOPE



ISOMETRIC

NOTE

1. Post shall have sufficient strength and durability to support the fence through the life of the project.



STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT

MARK W. MAURER
CERTIFICATE NO. 000598

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HIGH VISIBILITY FENCE

STANDARD PLAN I-10.10-01

SHEET 1 OF 1 SHEET

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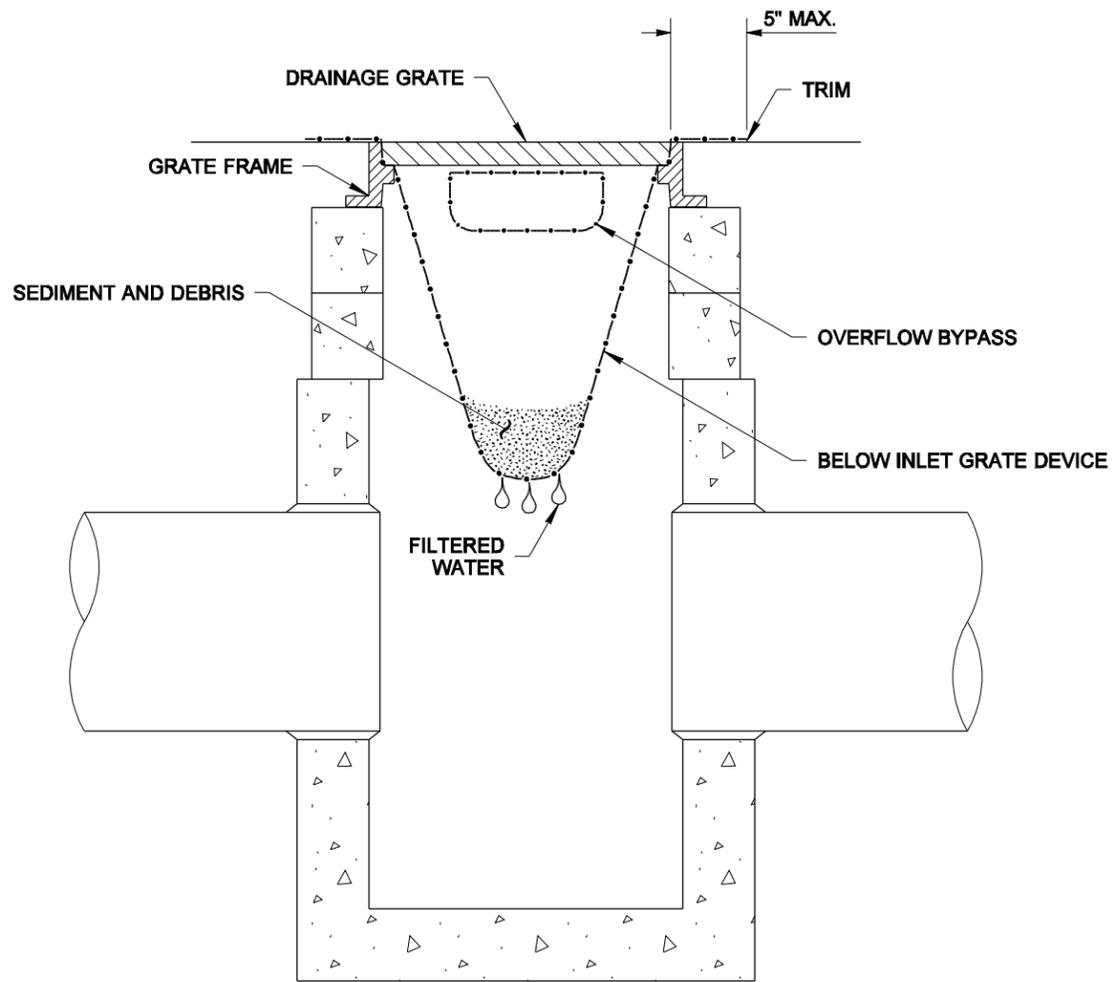
Pasco Bakotich III 08-11-09

STATE DESIGN ENGINEER

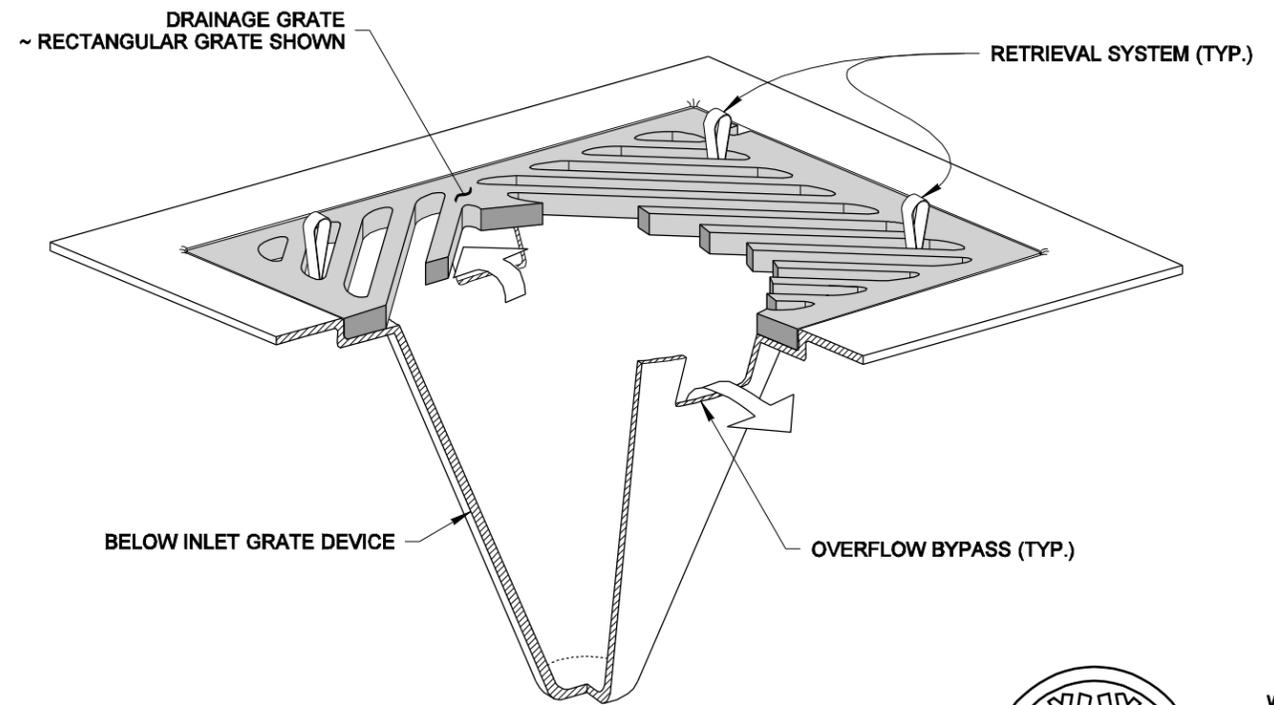
DATE



Washington State Department of Transportation



SECTION VIEW
NOT TO SCALE



ISOMETRIC VIEW

NOTES

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).



STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT

MARK W. MAURER
CERTIFICATE NO. 000598

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**STORM DRAIN
INLET PROTECTION
STANDARD PLAN I-40.20-00**

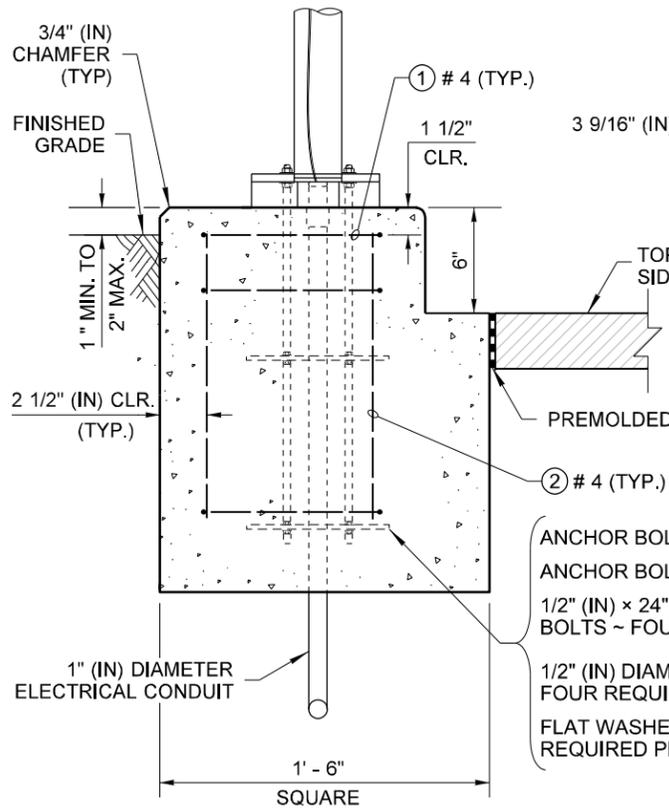
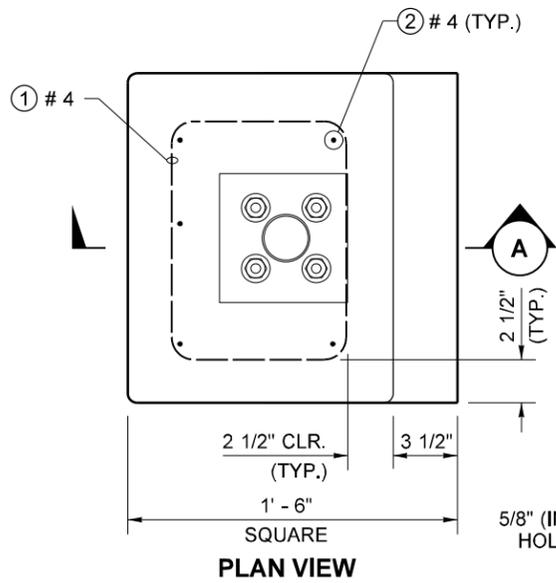
SHEET 1 OF 1 SHEET

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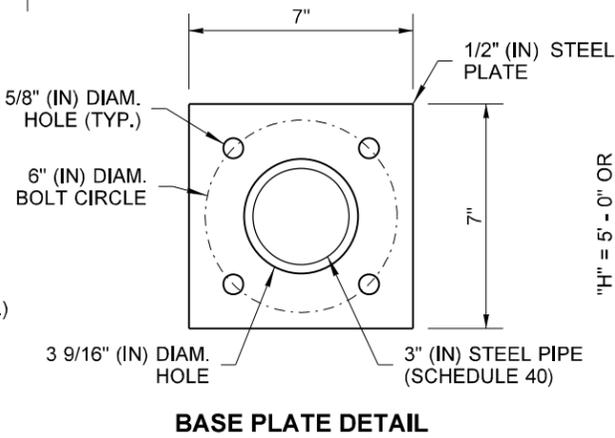
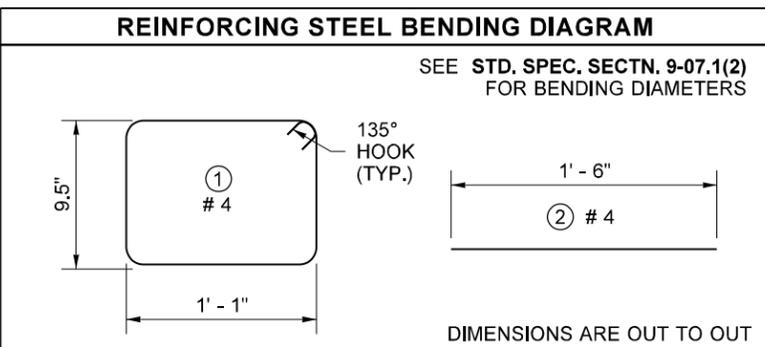
Pasco Bakotich III **09-20-07**
STATE DESIGN ENGINEER DATE



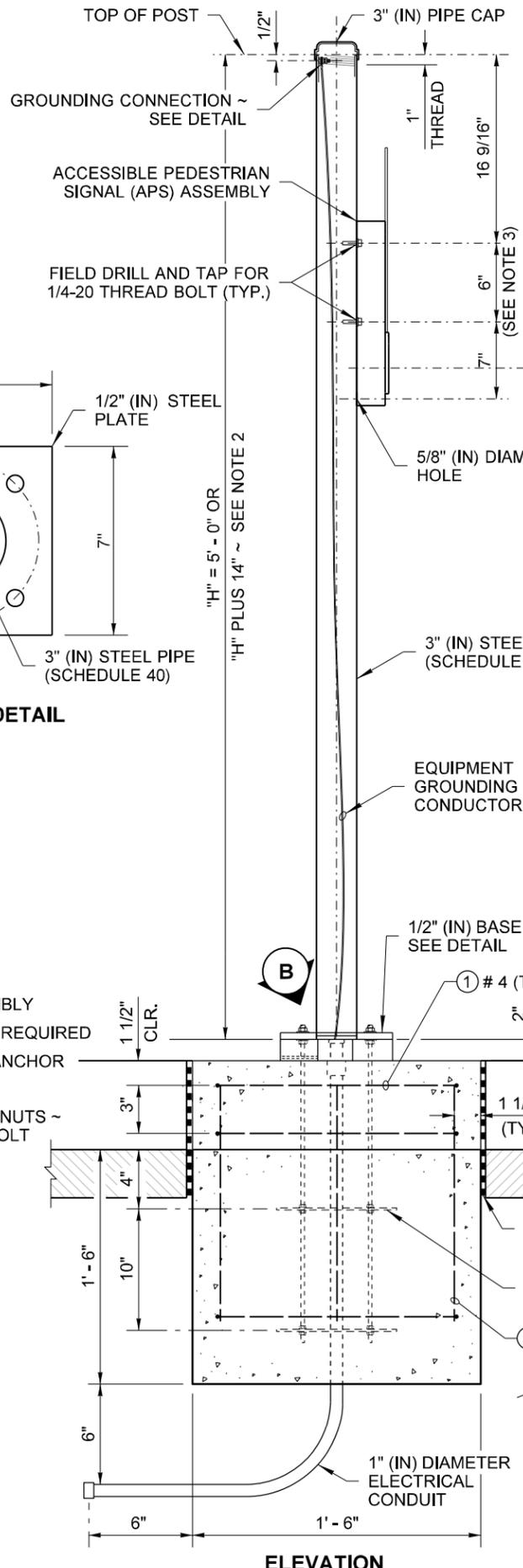
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SECTION A



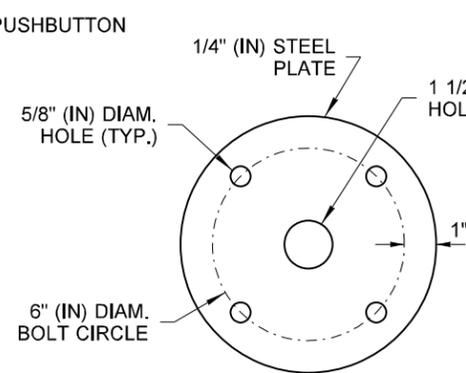
BASE PLATE DETAIL



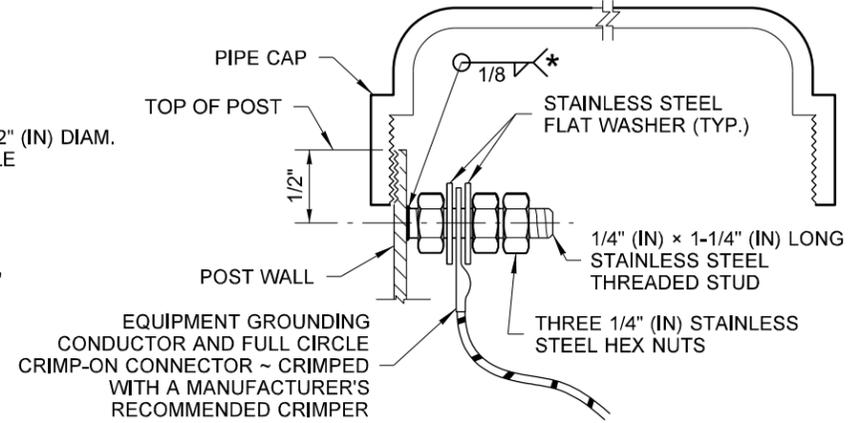
ELEVATION

TYPE PPB STANDARD DETAILS

- NOTES**
1. See **Standard Plan J-20.26** for Accessible Pedestrian Pushbutton details.
 2. Where shown in the plans, install plaque (R10-32P) "PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME" above the Accessible Pedestrian Signal (APS) assembly. Add 14" (in) to the PPB post height to accommodate plaque and leave a 2" (in) space between signs.
 3. Mounting distances vary between manufacturers. See manufacturers recommendations for mounting information.
 4. Junction Box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max.) from the Standard.
 5. Supplemental Grounding Conductor shall be non-insulated #4 AWG stranded copper and shall be clamped to vertical rebar with a connector suitable for use embedded in concrete: Provide 3' - 0" min. slack. Attach to pole grounding stud with a full circle crimp-on connector (crimped with a manufacturer recommended crimper).
 6. Two button installation may require adaptor(s).



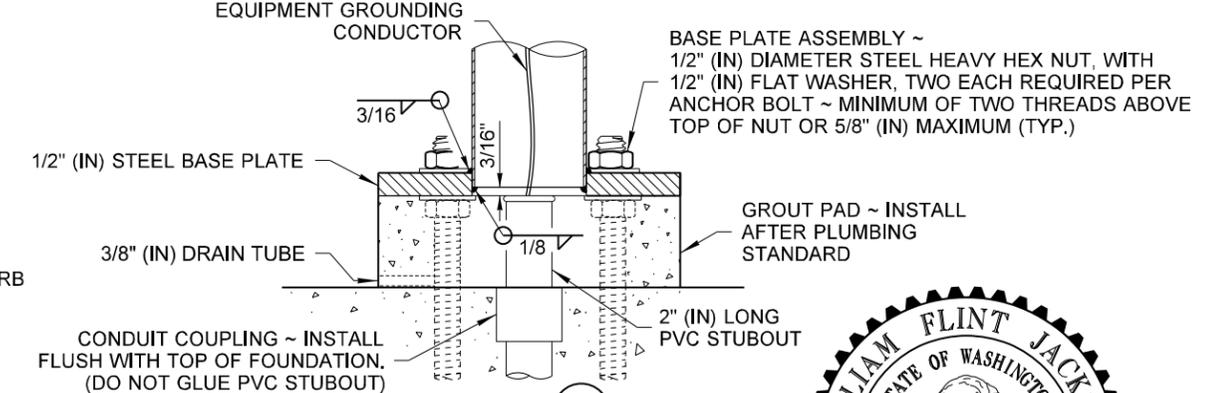
ANCHOR BOLT TEMPLATE



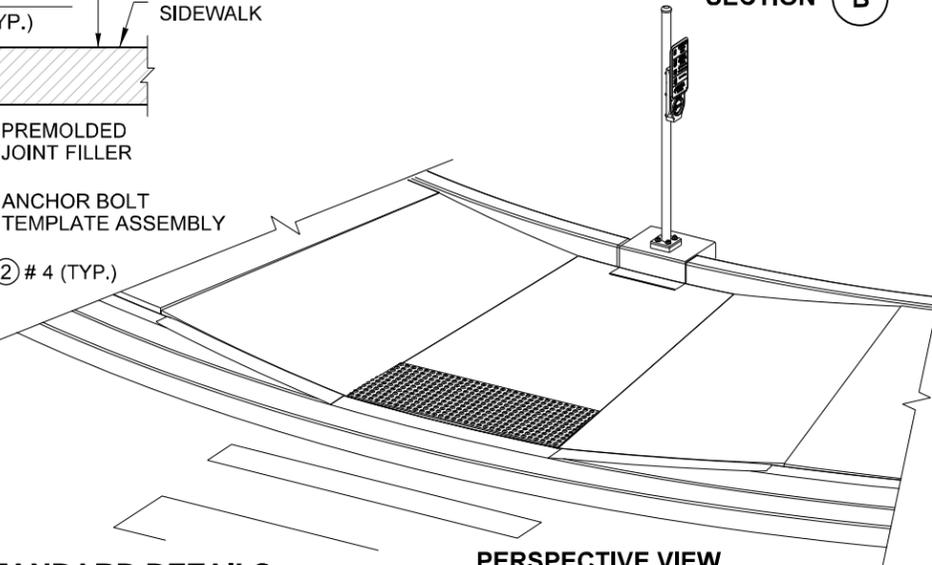
GROUNDING CONNECTION DETAIL

* WELD STUD TO POLE WALL TO MAXIMUM EXTENT POSSIBLE ~ 1/2" (IN) MINIMUM WELD

CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS



SECTION B



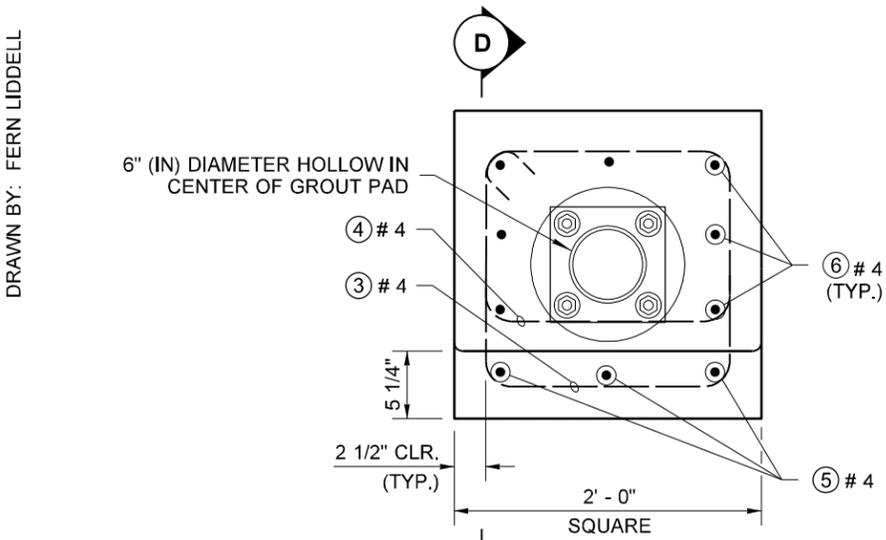
PERSPECTIVE VIEW



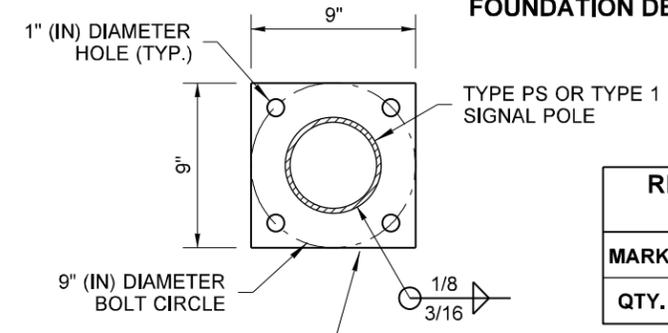
Jackson, Flint
Jul 29 2019 2:54 PM
**ACCESSIBLE PEDESTRIAN
PUSHBUTTON WITH
CURB BASE
STANDARD PLAN J-20.11-03**

SHEET 1 OF 2 SHEETS
APPROVED FOR PUBLICATION
Roark, Steve
Jul 31 2019 12:14 PM
STATE DESIGN ENGINEER
Washington State Department of Transportation

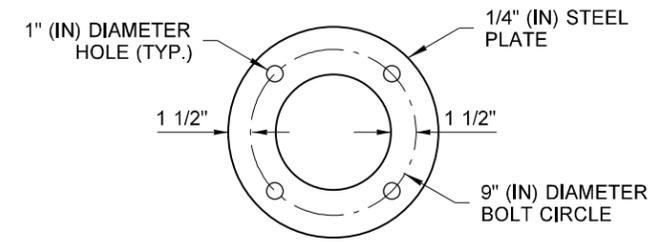
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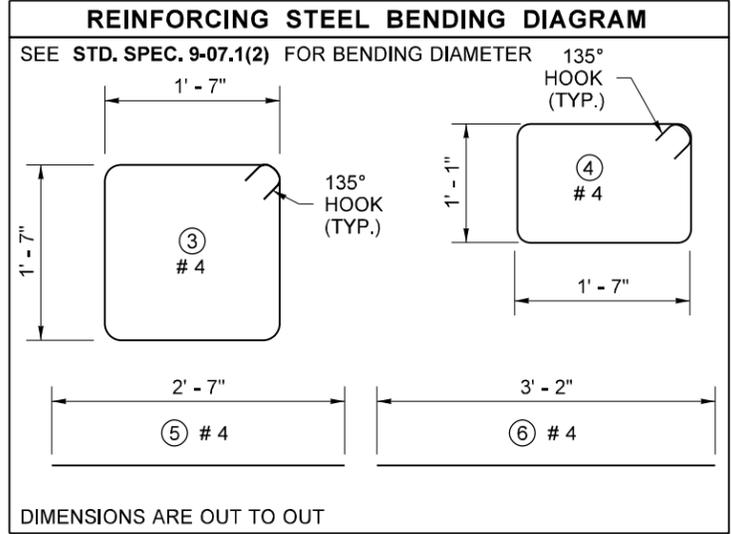
PLAN VIEW FOUNDATION DETAILS



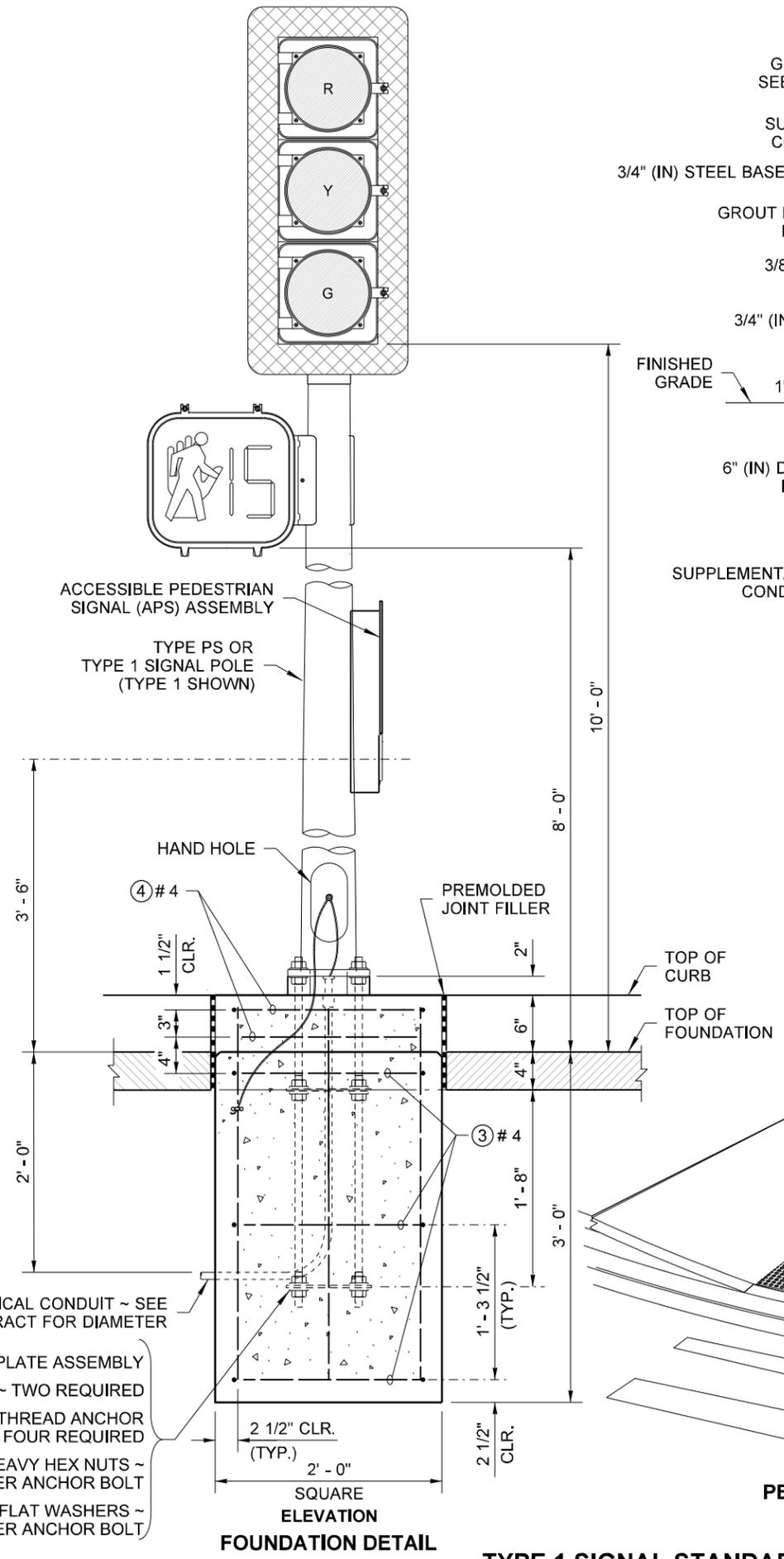
BASE PLATE DETAIL



ANCHOR BOLT TEMPLATE

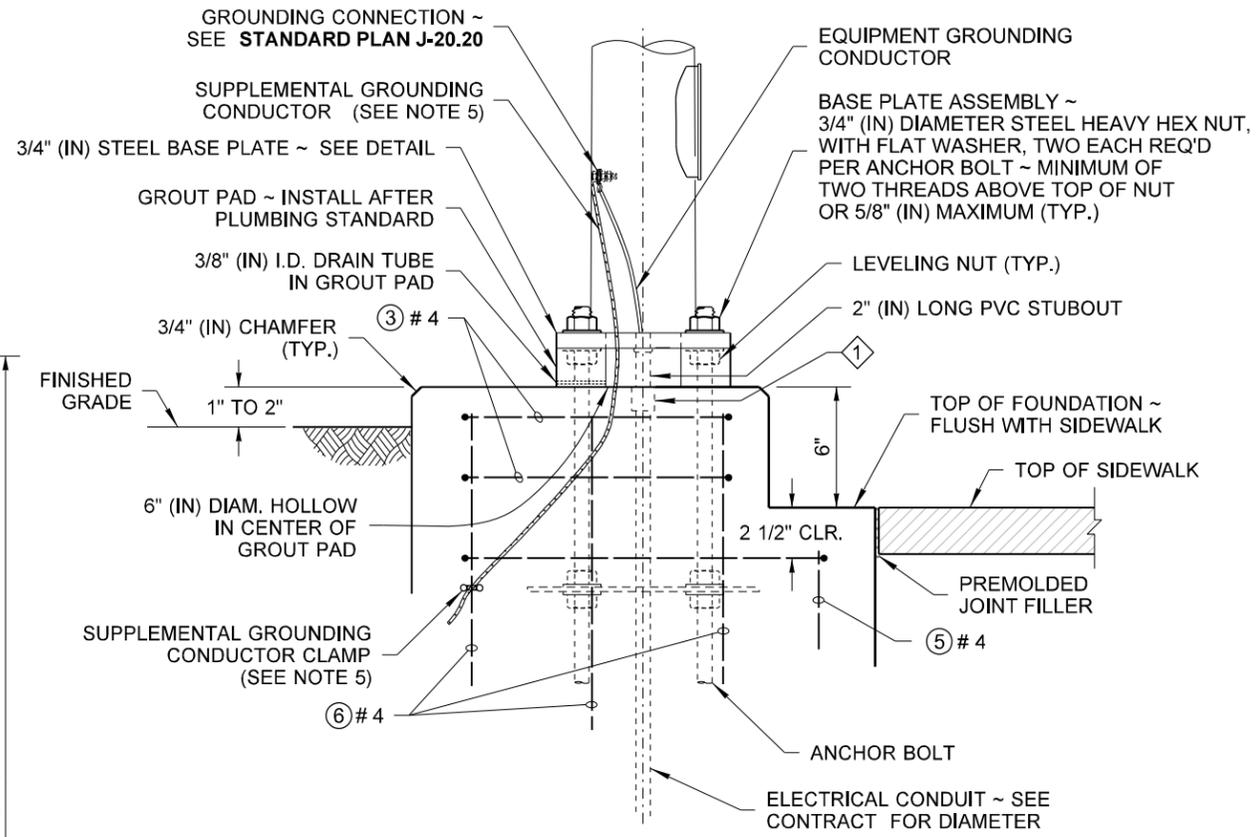


REINFORCING STEEL QUANTITIES LIST				
MARK	③	④	⑤	⑥
QTY.	3	2	3	7



FOUNDATION DETAIL

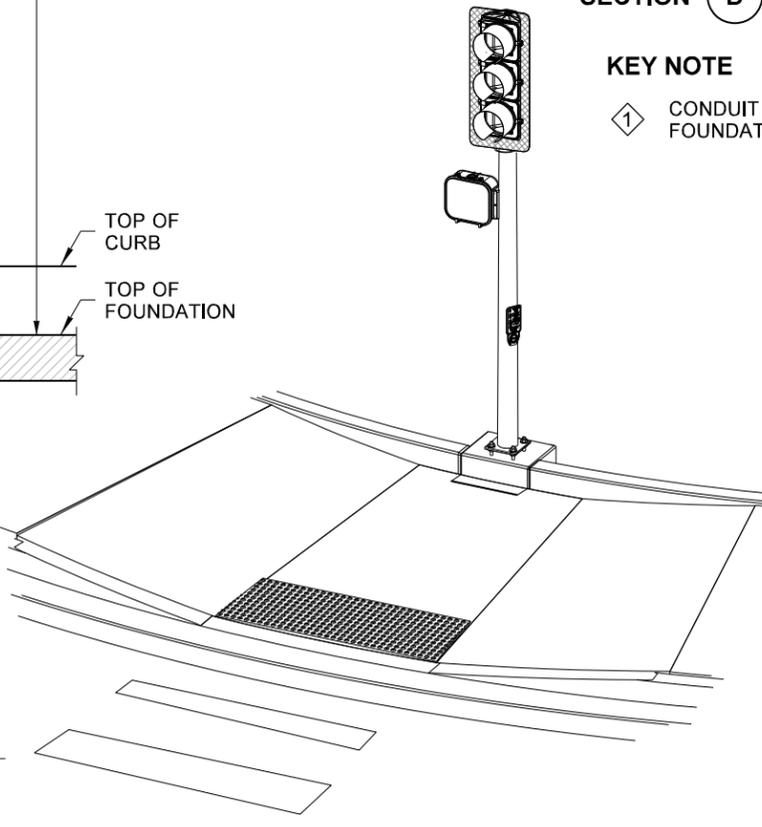
TYPE 1 SIGNAL STANDARD DETAILS



SECTION D

KEY NOTE

① CONDUIT COUPLING ~ INSTALL FLUSH WITH TOP OF FOUNDATION. (DO NOT GLUE PVC STUBOUT)



Jackson, Flint
Jul 29 2019 2:54 PM

ACCESSIBLE PEDESTRIAN PUSHBUTTON WITH CURB BASE

STANDARD PLAN J-20.11-03

SHEET 2 OF 2 SHEETS

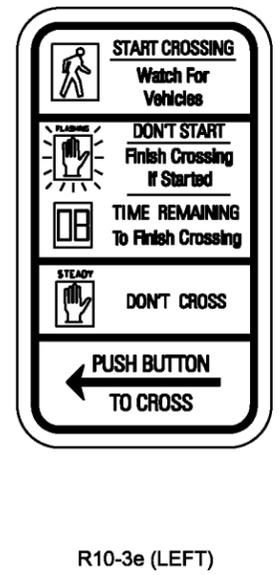
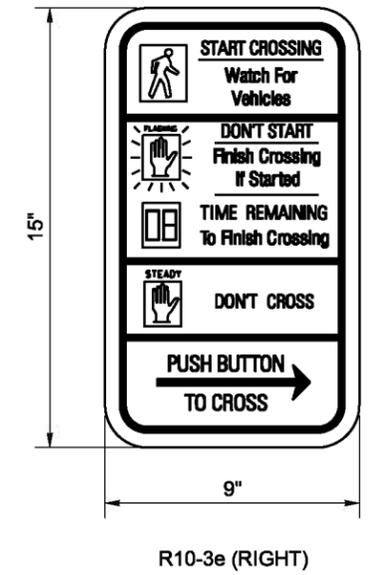
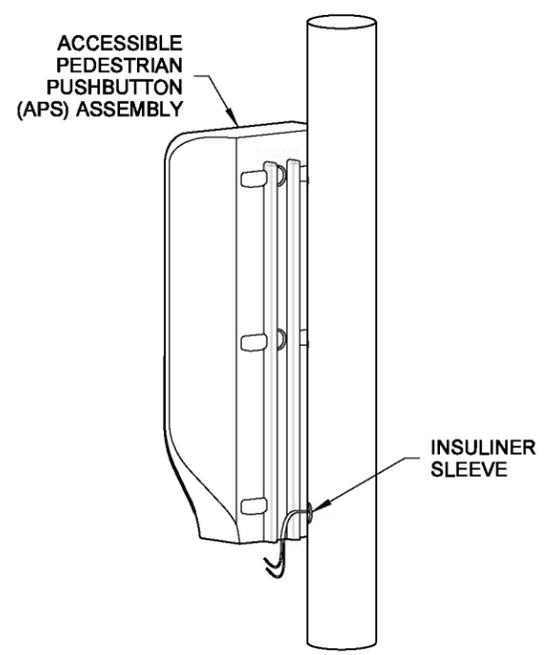
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Roark, Steve
Jul 31 2019 12:14 PM

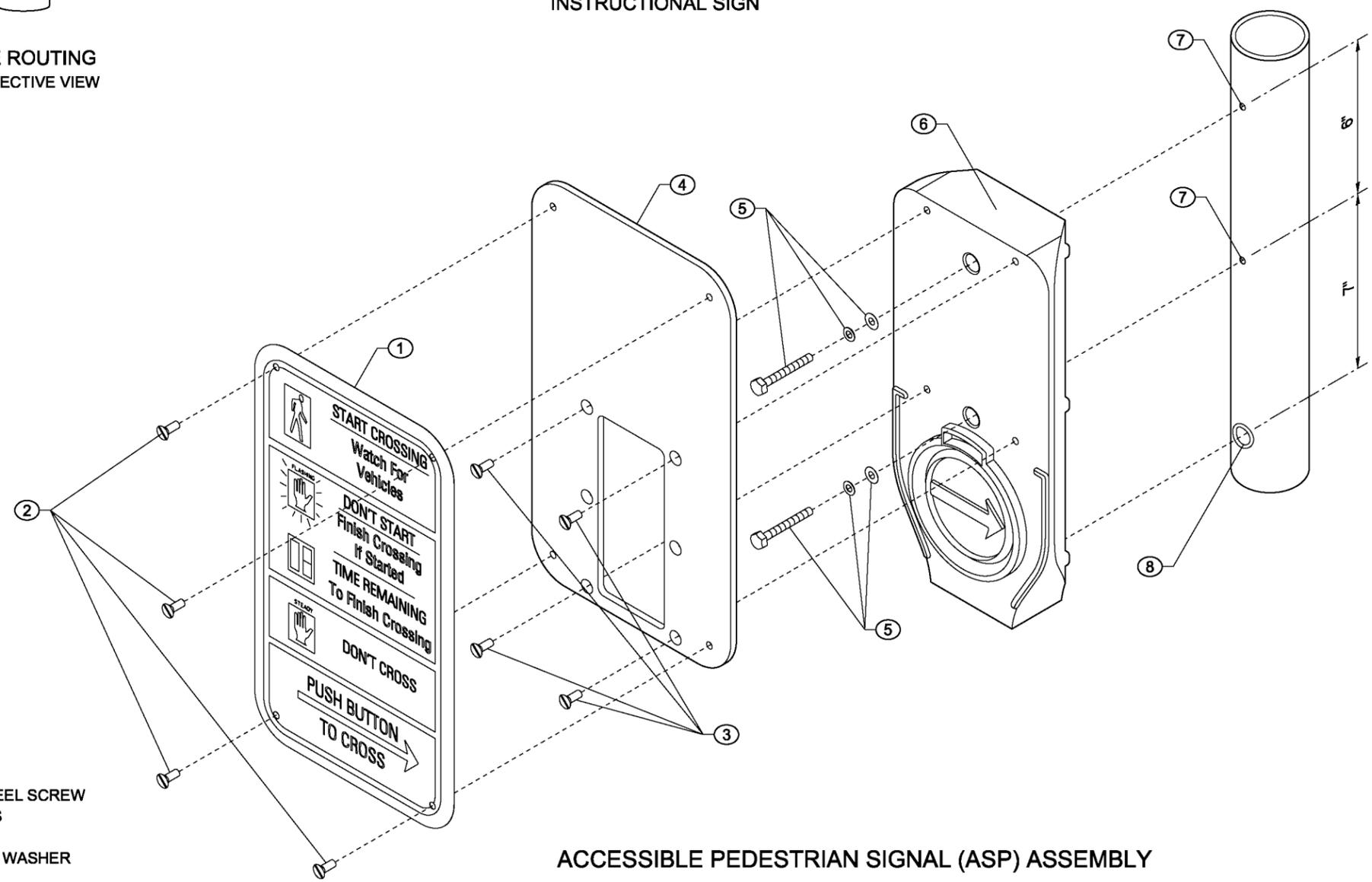
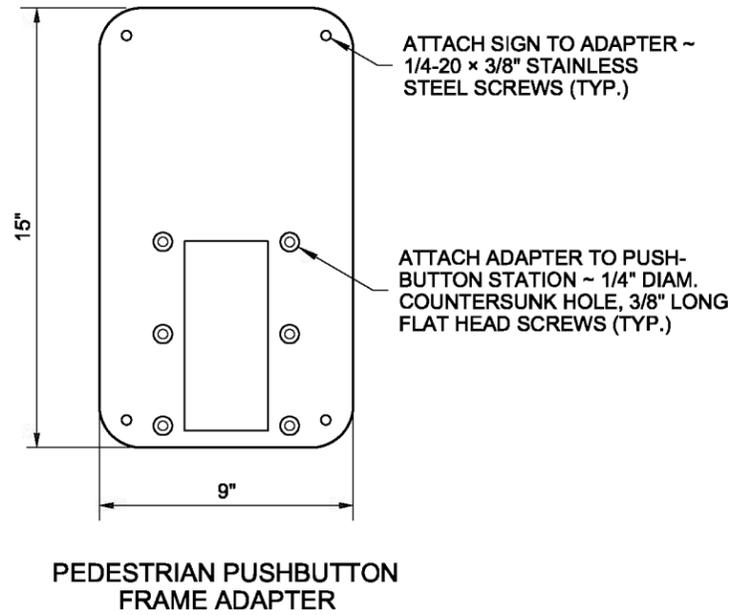
STATE DESIGN ENGINEER

Washington State Department of Transportation

DRAWN BY: LISA CYFORD

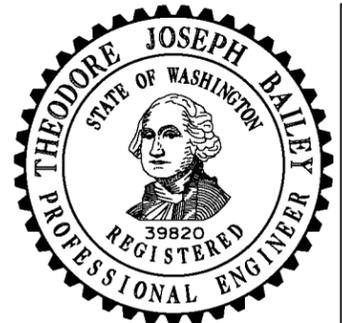
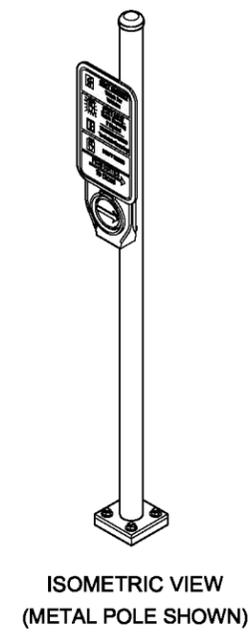


PEDESTRIAN PUSHBUTTON INSTRUCTIONAL SIGN



- KEY**
- ① FACE PLATE
 - ② 1/4-20 x 3/8" LONG STAINLESS STEEL SCREW
 - ③ 1/4-20 STAINLESS STEEL SCREWS
 - ④ PUSHBUTTON FRAME ADAPTER
 - ⑤ 1/4-20 STAINLESS STEEL BOLT W/ WASHER AND LOCK WASHER
 - ⑥ PUSHBUTTON STATION
 - ⑦ DRILL AND TAP SHAFT FOR 1/4" DIAM. BOLT
 - ⑧ DRILL AND TAP SHAFT FOR 5/8" WIRE GUIDE HOLE - ADD INSULINER

ACCESSIBLE PEDESTRIAN SIGNAL (ASP) ASSEMBLY
METAL POLE INSTALLATION
PPB-M



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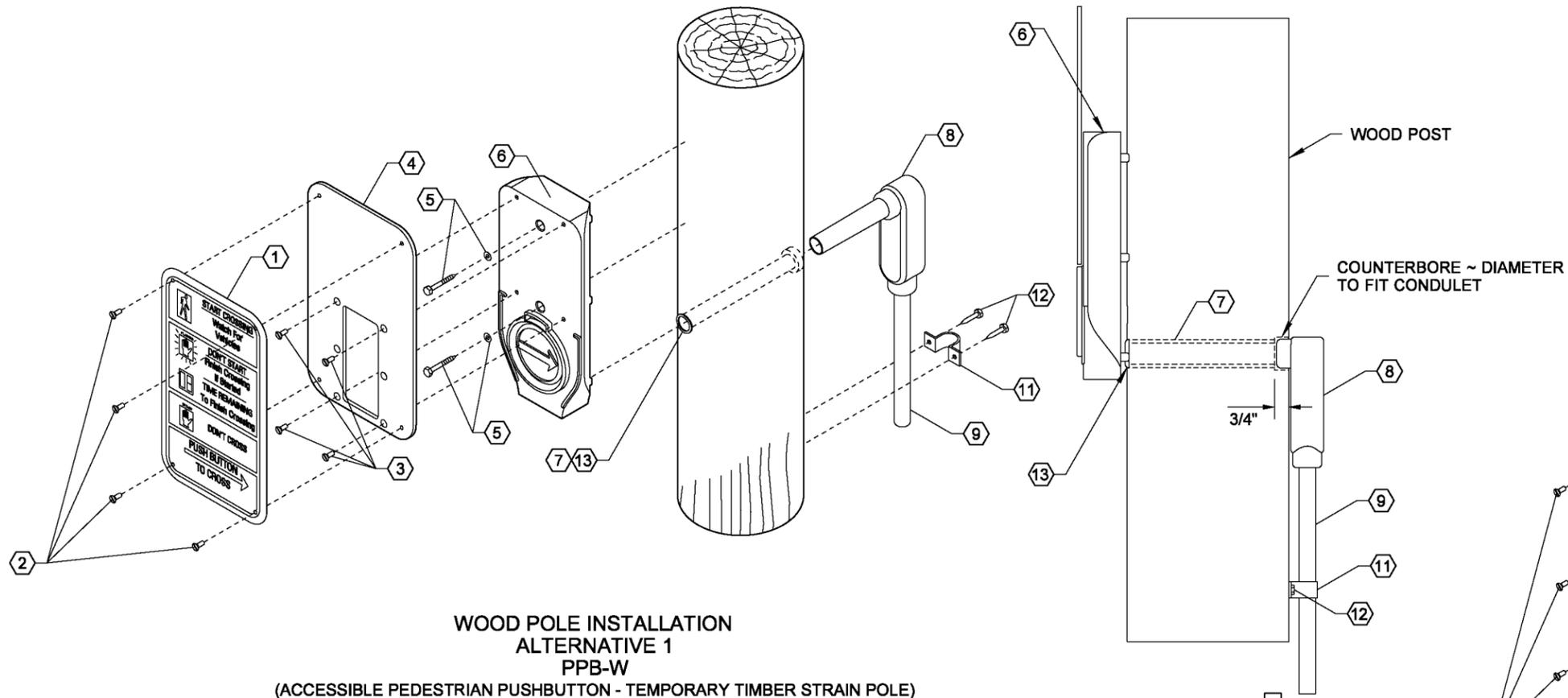
ACCESSIBLE PEDESTRIAN PUSHBUTTON (PPB) DETAILS
STANDARD PLAN J-20.26-01

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

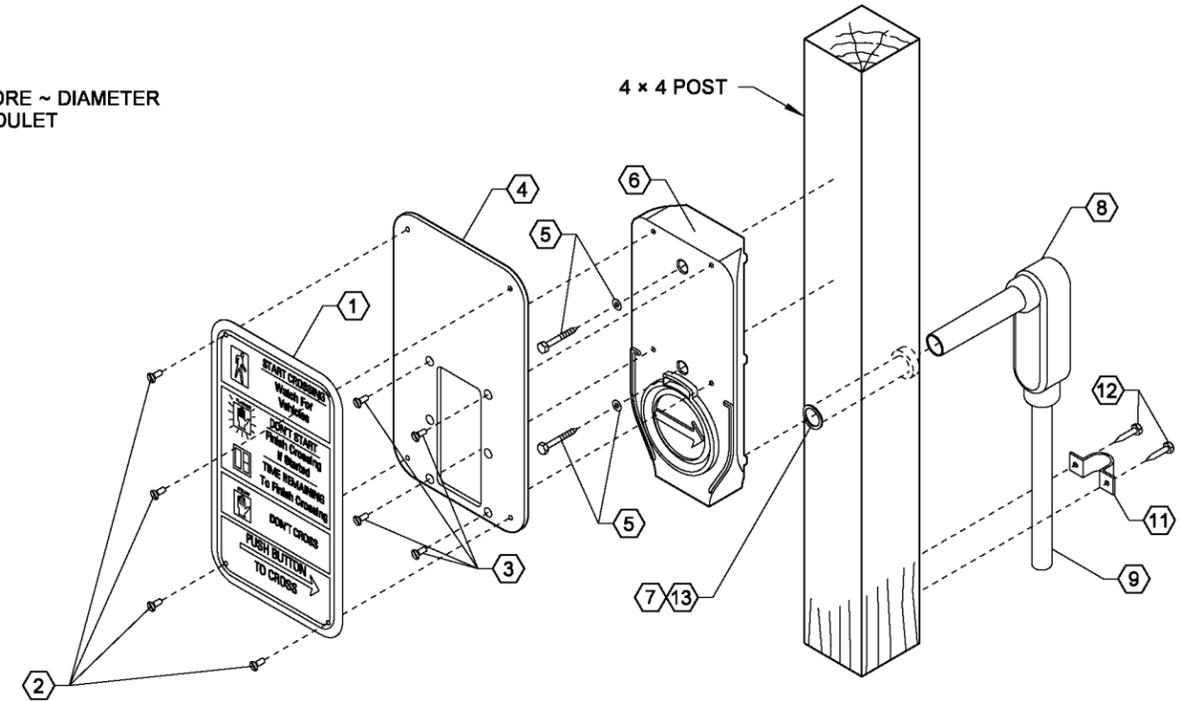
Pasco Bakotich III 7/12/12
STATE DESIGN ENGINEER DATE

Washington State Department of Transportation



**WOOD POLE INSTALLATION
ALTERNATIVE 1
PPB-W**

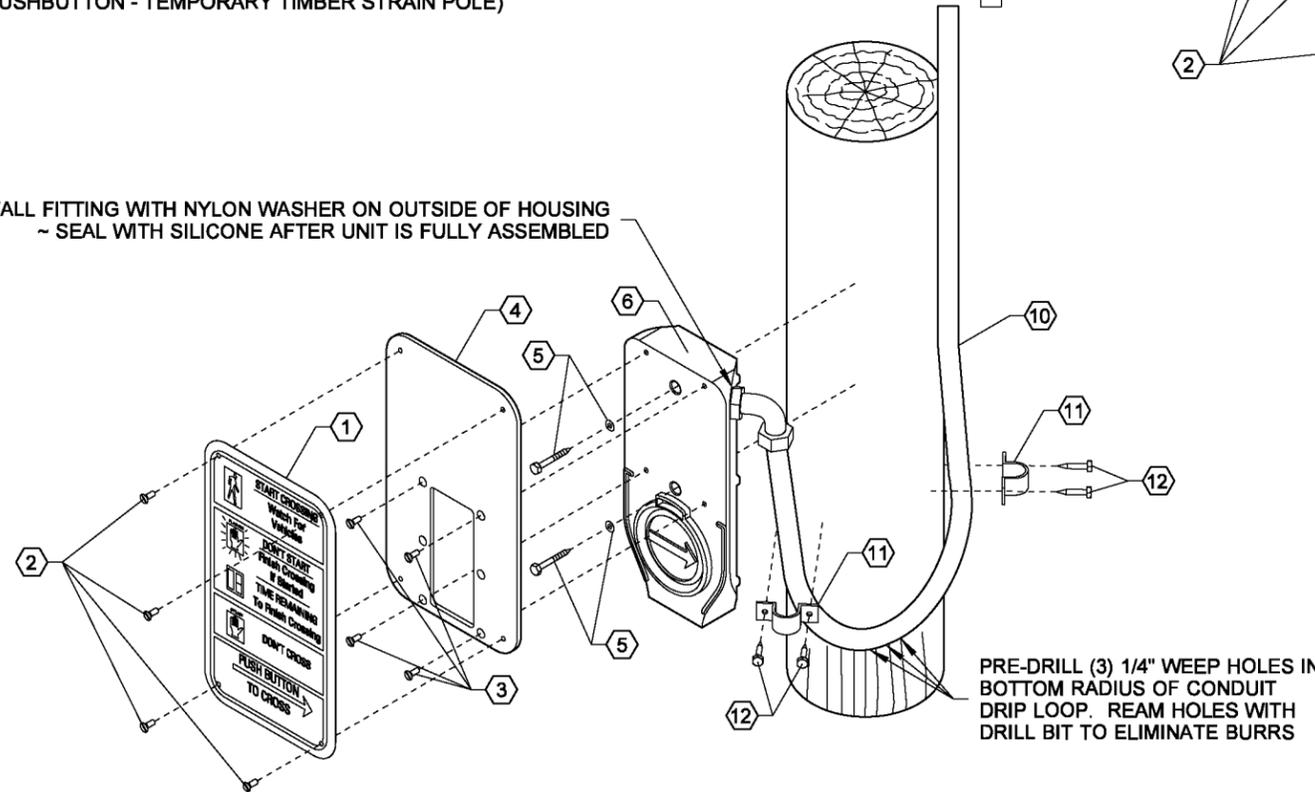
(ACCESSIBLE PEDESTRIAN PUSHBUTTON - TEMPORARY TIMBER STRAIN POLE)



**WOOD POLE INSTALLATION
ALTERNATIVE 3
PPB-W**

(ACCESSIBLE PEDESTRIAN PUSHBUTTON - TEMPORARY TIMBER POLE)

INSTALL FITTING WITH NYLON WASHER ON OUTSIDE OF HOUSING
~ SEAL WITH SILICONE AFTER UNIT IS FULLY ASSEMBLED



ACCESSIBLE PEDESTRIAN SIGNAL (ASP) ASSEMBLY

**WOOD POLE INSTALLATION
ALTERNATIVE 2
PPB-W**

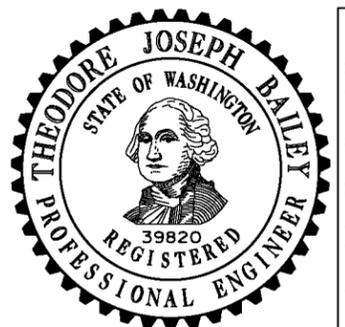
(ACCESSIBLE PEDESTRIAN PUSHBUTTON - TEMPORARY TIMBER STRAIN POLE)

TEMPORARY TIMBER POLE

PRE-DRILL (3) 1/4" WEEP HOLES IN
BOTTOM RADIUS OF CONDUIT
DRIP LOOP. REAM HOLES WITH
DRILL BIT TO ELIMINATE BURRS

KEY

- 1 FACE PLATE
- 2 1/4-20 x 3/8" LONG STAINLESS STEEL SCREW
- 3 1/4-20 STAINLESS STEEL SCREWS
- 4 PUSHBUTTON FRAME ADAPTER
- 5 LAG BOLT WITH WASHER
- 6 PUSHBUTTON STATION
- 7 CONDUIT DIAMETER + 1/8" HOLE THRU POLE
- 8 CONDULET
- 9 3/4" CONDUIT
- 10 LIQUID-TITE FLEX CONDUIT
- 11 ONE PIECE TWO HOLE CLAMP
- 12 LAG BOLT
- 13 INSULINER SLEEVE



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**ACCESSIBLE PEDESTRIAN
PUSHBUTTON (PPB)
DETAILS**

STANDARD PLAN J-20.26-01

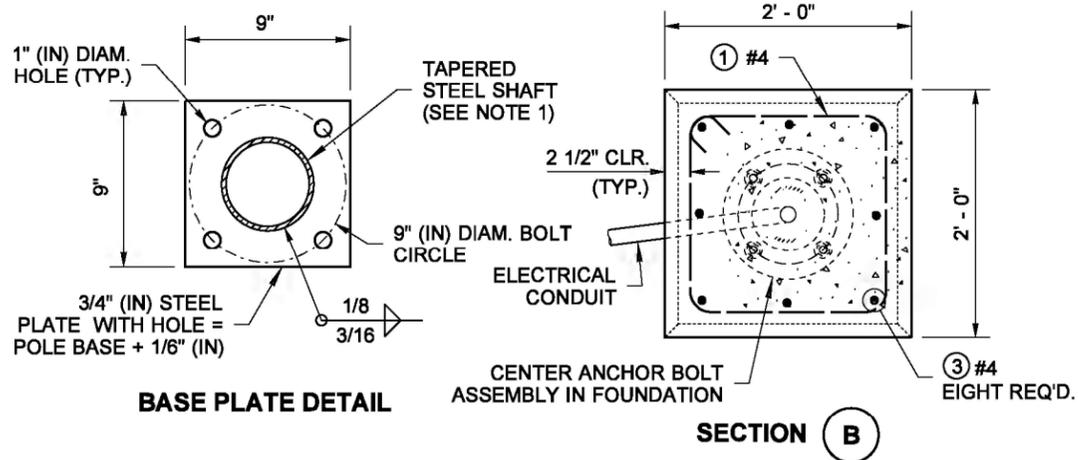
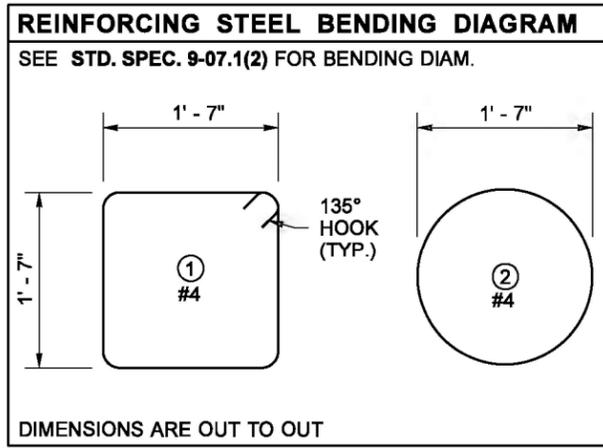
SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION

Pasco Bakotich III 7/12/12

STATE DESIGN ENGINEER DATE

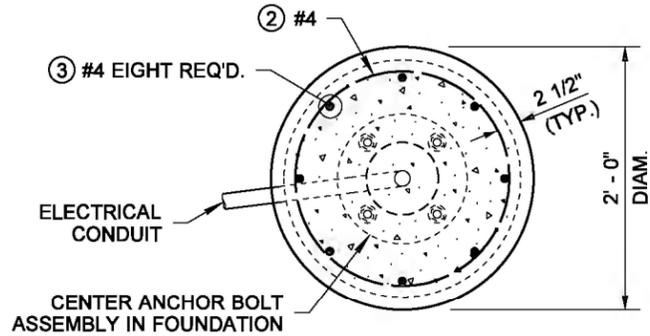




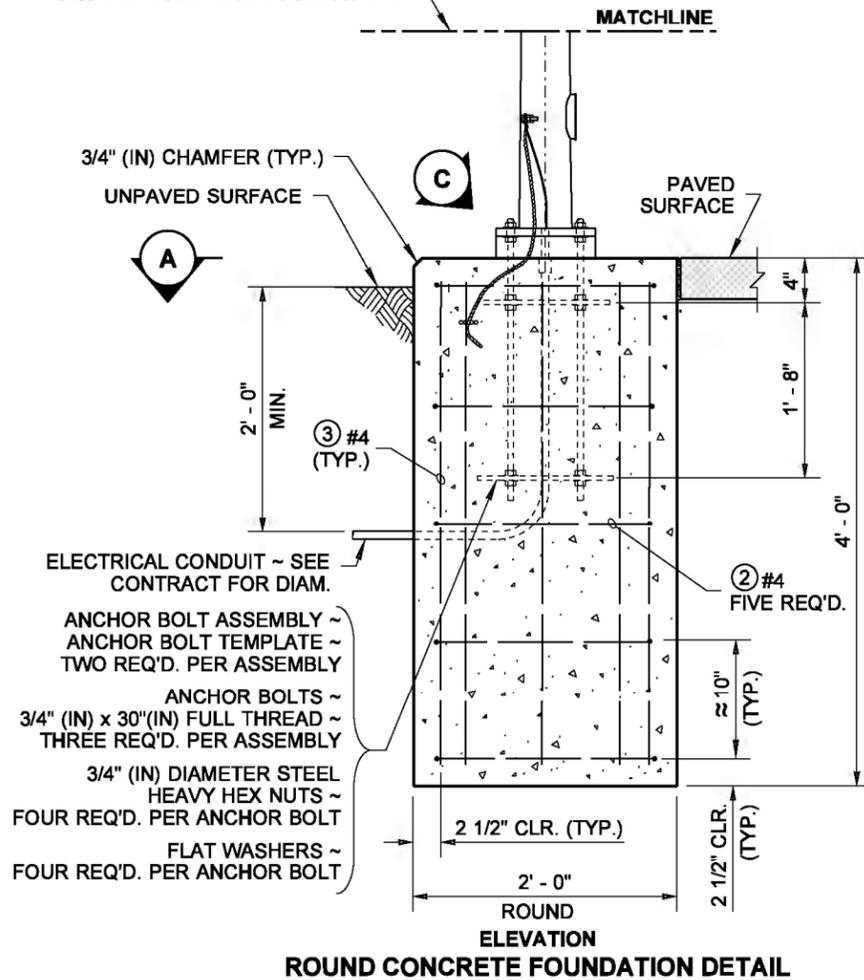
NOTES

1. Clamping bolts shall be tightened to 50 ft-lbs max. torque. After state inspection, burr threads to prevent nut rotation. DO NOT OVERTIGHTEN.
2. The final height of the Anchor Bolts shall be below the top of the slip plate assembly to ensure proper function of the slip base.
3. Supplemental grounding conductor shall be non-insulated #4 AWG stranded copper and shall be clamped to vertical rebar with a connector suitable for use embedded in concrete. Provide 3' - 0" min. slack. Attach to pole grounding stud with a full circle crimp-on connector (crimped with a manufacturer recommended crimper).
4. Junction box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max.) from the Standard.
5. Provide cable tie at wiring entering the junction box (for slip base installations only) ~ See **Detail A, Standard Plan J-28.70**.
6. Keeper Plate shall not extend beyond the edges of the pole base plate.

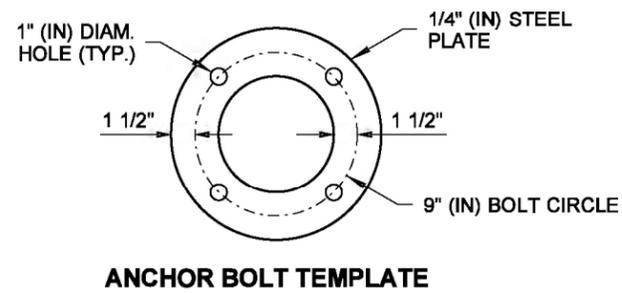
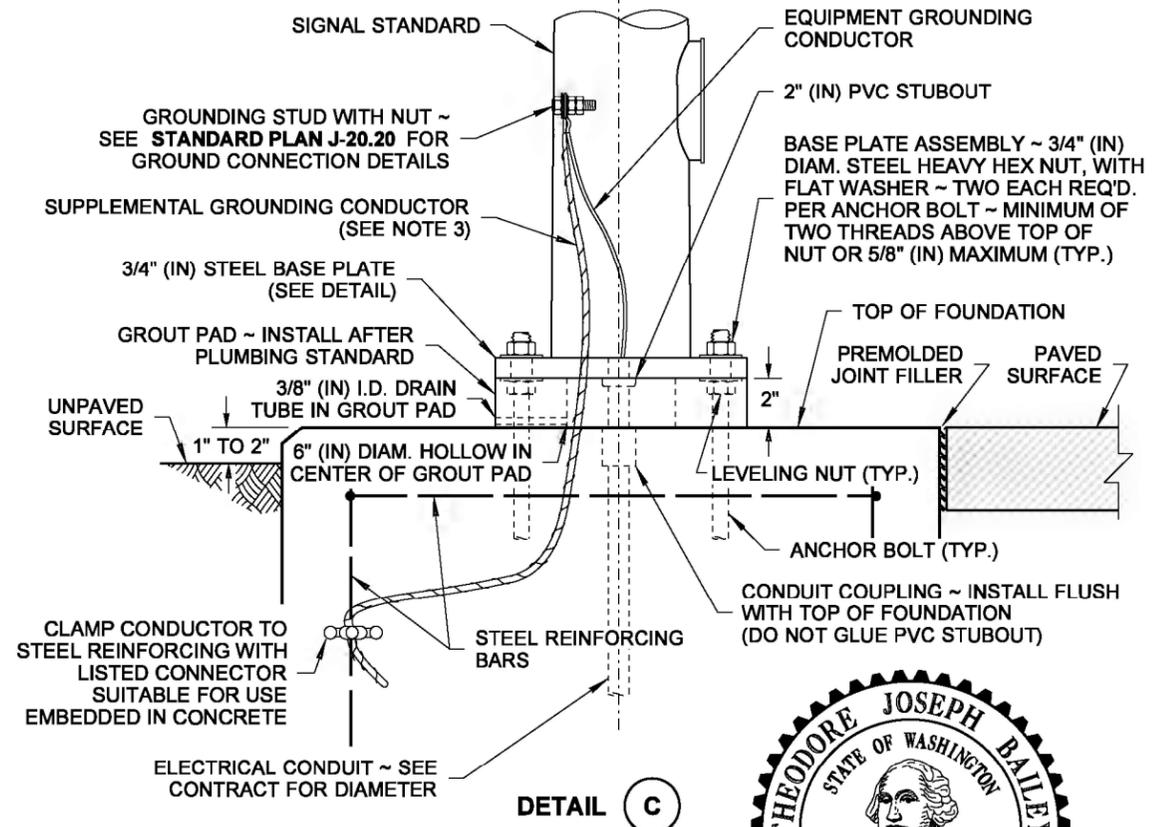
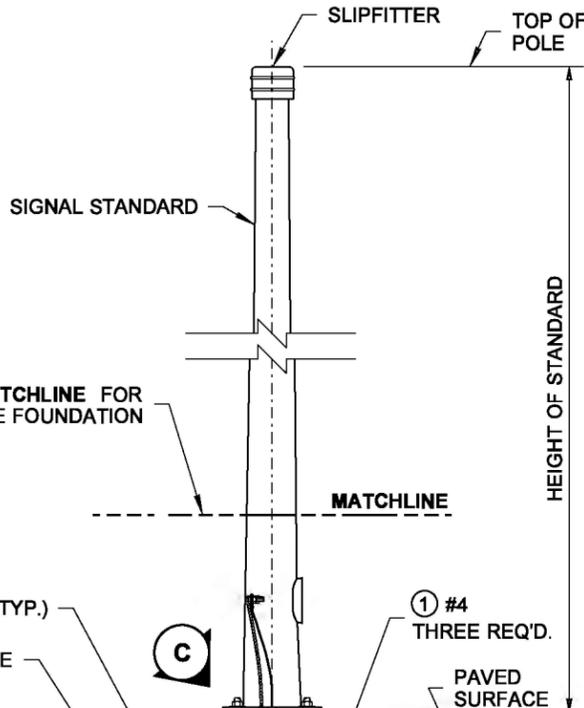
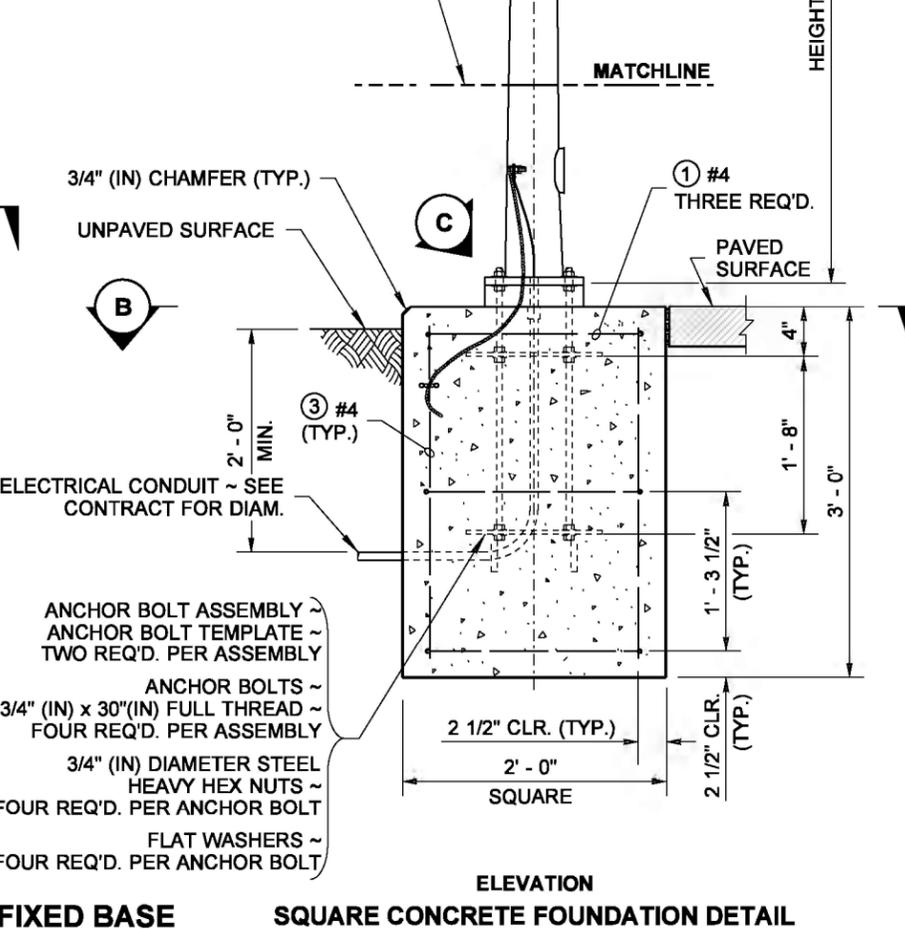
DRAWN BY: FERN LIDDELL



SEE DETAILS ABOVE MATCHLINE FOR SQUARE CONCRETE FOUNDATION



USE DETAILS ABOVE MATCHLINE FOR ROUND CONCRETE FOUNDATION



THEODORE JOSEPH BAILEY
STATE OF WASHINGTON
REGISTERED ENGINEER
39820

Theodore Joseph Bailey
Bailey, Ted
Jun 26 2014 4:29 PM

TYPE PS, TYPE 1, RM & FB SIGNAL STANDARD FOUNDATION DETAILS
STANDARD PLAN J-21.10-04

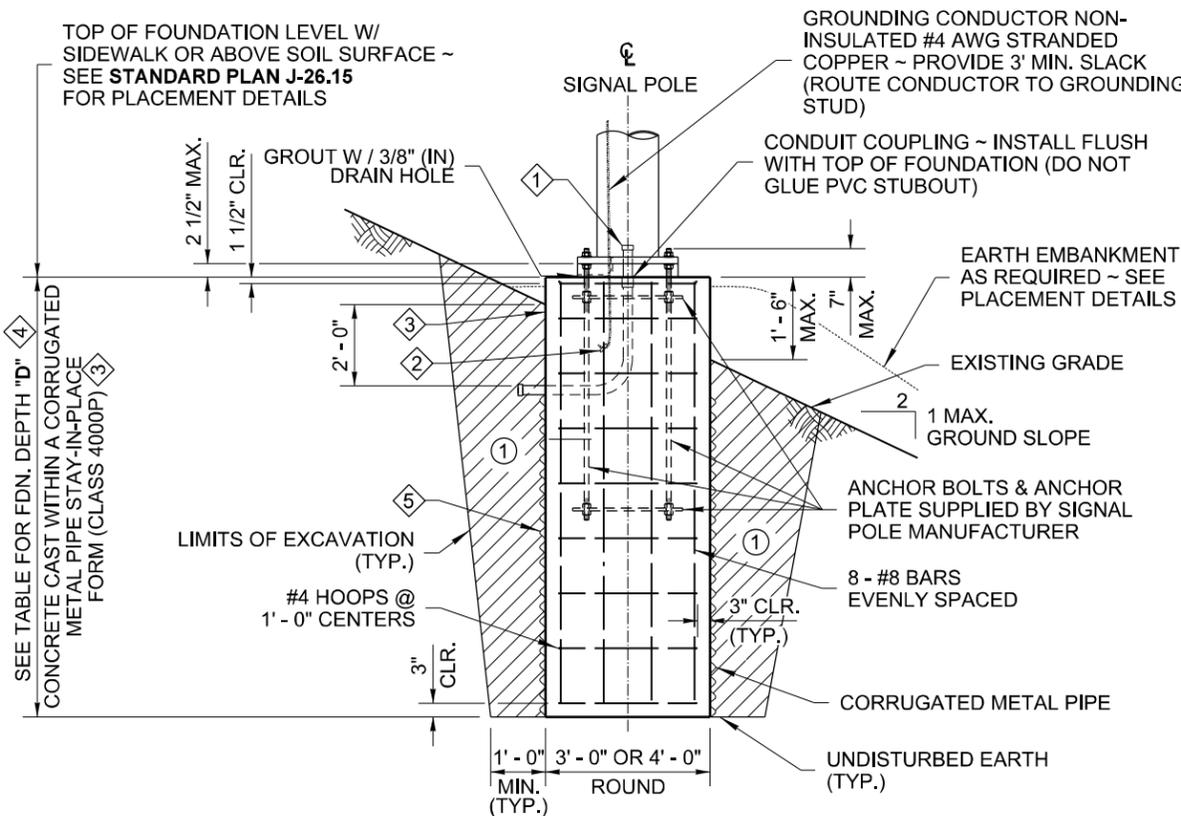
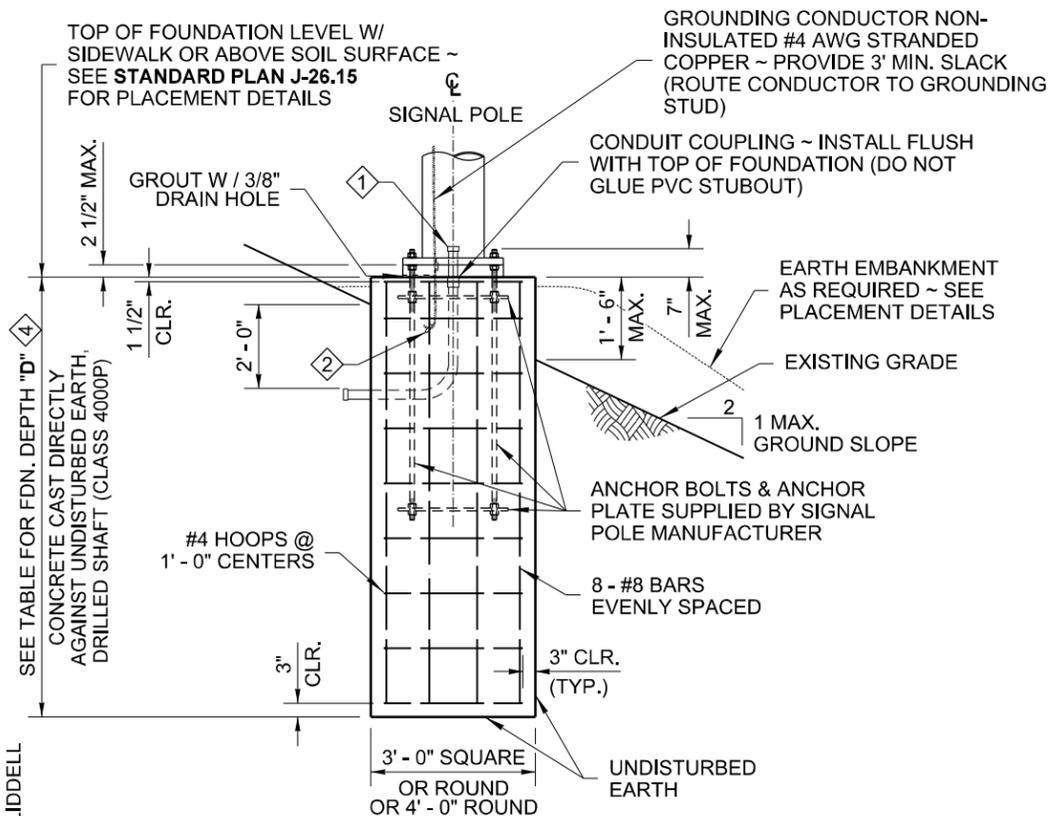
SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

Russ B. B. B.
Bakotich, Pasco
Jun 30 2014 3:12 PM

STATE DESIGN ENGINEER





NOTES

1. This structure has been designed according to the Fifth Edition 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. Basic wind velocity is 90 mph, Design Life/Recurrence Interval 50 years, and Fatigue Category III.
2. Foundations are designed for Type II, III, and SD Signal Standards with a maximum mast arm length of 65'.
3. Foundations are designed for Single Mast Arm Standards and Double Mast Arm Standards with 90° between arms. Special foundation design is required for Double Arm Standards where the angle between mast arms is other than 90°. For Double Mast Arm Standards with 90° between arms, use larger XYZ value for foundation depth selection.
4. Foundations not within the parameters of this standard require Special Design. Contact the **WSDOT Bridge and Structures Office** through the Engineer for Special Foundation Designs.
5. Where a foundation is constructed within a Media Filter Drain, the foundation depth shown in the Contract Plans shall be increased by the depth of the Media Filter Drain.
6. The top 2 feet of the foundation shall use a smooth form (such as paper or cardboard). After the concrete has cured, this entire form shall be removed.
7. For design parameters between the values listed in Table, depth requirements may be interpolated between the values provided.
8. Install Signal Foundation Identification Tag. See **Standard Plan J-26.15** for details.

DRAWN BY: FERN LIDDELL

FOUNDATION REINFORCEMENT DETAIL
CONCRETE CAST DIRECTLY AGAINST UNDISTURBED EARTH, DRILLED SHAFT

ALTERNATE # 1

FOUNDATION REINFORCEMENT AND BACKFILL DETAIL
CONCRETE CAST WITHIN A CORRUGATED METAL PIPE STAY-IN-PLACE FORM

ALTERNATE # 2

- ① CONDUIT SIZE AND QUANTITY AS SHOWN IN THE CONTRACT; CAP BOTH ENDS.
- ② CLAMP CONDUCTOR TO STEEL REINFORCING WITH LISTED CONNECTOR SUITABLE FOR USE EMBEDDED IN CONCRETE

- ③ PAPER OR CARDBOARD FORM SHALL NOT STAY-IN-PLACE
- ④ SEE NOTE 5

ALTERNATE #2 - CONSTRUCTION METHOD
METAL (SUBSURFACE) FORM REQUIRED

FOUNDATION DEPTH "D" TABLE

ALTERNATE # 1 DRILLED SHAFT-TYPE CONSTRUCTION
FOR LATERAL BEARING PRESSURE = 2500 PSF & Ø = 34°, 1500 PSF & Ø = 28°, 1000 PSF & Ø = 26°

GROUND SLOPE = 3H : 1V OR FLATTER										GROUND SLOPE = GREATER THAN 3H : 1V TO 2H : 1V									
ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT ³)								ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT ³)							
		700	900	1350	1500	1900	2300	2600	3000			700	900	1350	1500	1900	2300	2600	3000
1000 PSF	3' - 0" ROUND	10' - 0"	10' - 0"	11' - 0"	11' - 0"	15' - 0"	18' - 0"	20' - 0"	20' - 0"	1000 PSF	3' - 0" ROUND	SPECIAL FOUNDATION TYPE							
	3' - 0" SQUARE	8' - 0"	8' - 0"	9' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	12' - 0"		3' - 0" SQUARE	SPECIAL FOUNDATION TYPE							
	4' - 0" ROUND	8' - 0"	8' - 0"	9' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"	12' - 0"		4' - 0" ROUND	SPECIAL FOUNDATION TYPE							
1500 PSF	3' - 0" ROUND	8' - 0"	8' - 0"	9' - 0"	11' - 0"	13' - 0"	15' - 0"	18' - 0"	18' - 0"	1500 PSF	3' - 0" ROUND	11' - 0"	11' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	21' - 0"	21' - 0"
	3' - 0" SQUARE	7' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"	9' - 0"	10' - 0"	10' - 0"		3' - 0" SQUARE	10' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"	12' - 0"	13' - 0"	13' - 0"
	4' - 0" ROUND	7' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"	9' - 0"	10' - 0"	10' - 0"		4' - 0" ROUND	10' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"	12' - 0"	13' - 0"	13' - 0"
2500 PSF OR GREATER	3' - 0" ROUND	6' - 0"	6' - 0"	7' - 0"	8' - 0"	9' - 0"	11' - 0"	15' - 0"	15' - 0"	2500 PSF OR GREATER	3' - 0" ROUND	9' - 0"	9' - 0"	10' - 0"	12' - 0"	12' - 0"	14' - 0"	18' - 0"	18' - 0"
	3' - 0" SQUARE	6' - 0"	6' - 0"	6' - 0"	6' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"		3' - 0" SQUARE	9' - 0"	9' - 0"	9' - 0"	9' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"
	4' - 0" ROUND	6' - 0"	6' - 0"	6' - 0"	6' - 0"	7' - 0"	7' - 0"	8' - 0"	8' - 0"		4' - 0" ROUND	9' - 0"	9' - 0"	9' - 0"	9' - 0"	10' - 0"	10' - 0"	11' - 0"	11' - 0"

ALTERNATE # 2 CORRUGATED METAL PIPE TYPE CONSTRUCTION
FOR LATERAL BEARING PRESSURE = 2500 PSF & Ø = 23°, 1500 PSF & Ø = 18°, 1000 PSF & Ø = 17°

GROUND SLOPE = 3H : 1V OR FLATTER										GROUND SLOPE = GREATER THAN 3H : 1V TO 2H : 1V									
ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT ³)								ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	XYZ (FT ³)							
		700	900	1350	1500	1900	2300	2600	3000			700	900	1350	1500	1900	2300	2600	3000
1000 PSF	3' - 0" ROUND	10' - 0"	10' - 0"	11' - 0"	15' - 0"	20' - 0"	25' - 0"	28' - 0"	28' - 0"	1000 PSF	3' - 0" ROUND	SPECIAL FOUNDATION TYPE							
	4' - 0" ROUND	8' - 0"	8' - 0"	9' - 0"	12' - 0"	13' - 0"	14' - 0"	15' - 0"	15' - 0"		4' - 0" ROUND	SPECIAL FOUNDATION TYPE							
1500 PSF	3' - 0" ROUND	8' - 0"	8' - 0"	11' - 0"	15' - 0"	18' - 0"	21' - 0"	25' - 0"	25' - 0"	1500 PSF	3' - 0" ROUND	11' - 0"	11' - 0"	14' - 0"	18' - 0"	21' - 0"	24' - 0"	28' - 0"	23' - 0"
	4' - 0" ROUND	7' - 0"	7' - 0"	7' - 0"	8' - 0"	10' - 0"	13' - 0"	15' - 0"	15' - 0"		4' - 0" ROUND	10' - 0"	10' - 0"	10' - 0"	11' - 0"	13' - 0"	16' - 0"	18' - 0"	18' - 0"
2500 PSF OR GREATER	3' - 0" ROUND	6' - 0"	6' - 0"	7' - 0"	11' - 0"	13' - 0"	18' - 0"	20' - 0"	20' - 0"	2500 PSF OR GREATER	3' - 0" ROUND	9' - 0"	9' - 0"	10' - 0"	14' - 0"	16' - 0"	21' - 0"	23' - 0"	23' - 0"
	4' - 0" ROUND	6' - 0"	6' - 0"	6' - 0"	6' - 0"	7' - 0"	9' - 0"	9' - 0"	9' - 0"		4' - 0" ROUND	9' - 0"	9' - 0"	9' - 0"	9' - 0"	10' - 0"	12' - 0"	12' - 0"	12' - 0"

When the existing soil will not retain a vertical face, over-excavate the foundation area and install a 36" or 48" diameter corrugated metal (pipe) form. The top of the corrugated metal form shall terminate 1 foot below final grade. Continue forming to full height using paper or cardboard form to achieve a smooth finish on final exposed cement concrete. Support the form as necessary to remain plumb.

Place the concrete foundation.

After concrete has cured, remove the entire paper or cardboard form portion.

- ① Shoring or Extra Excavation as required. Excavated area shall be backfilled with Controlled-Density Fill (CDF), or with soil in accordance with **Standard Specification Section 8-20.3(2)** and Compaction Method 1 of **Standard Specification Section 2-09.3(1)E**.



Zeldenrust, Richard
Jul 20 2016 8:25 AM

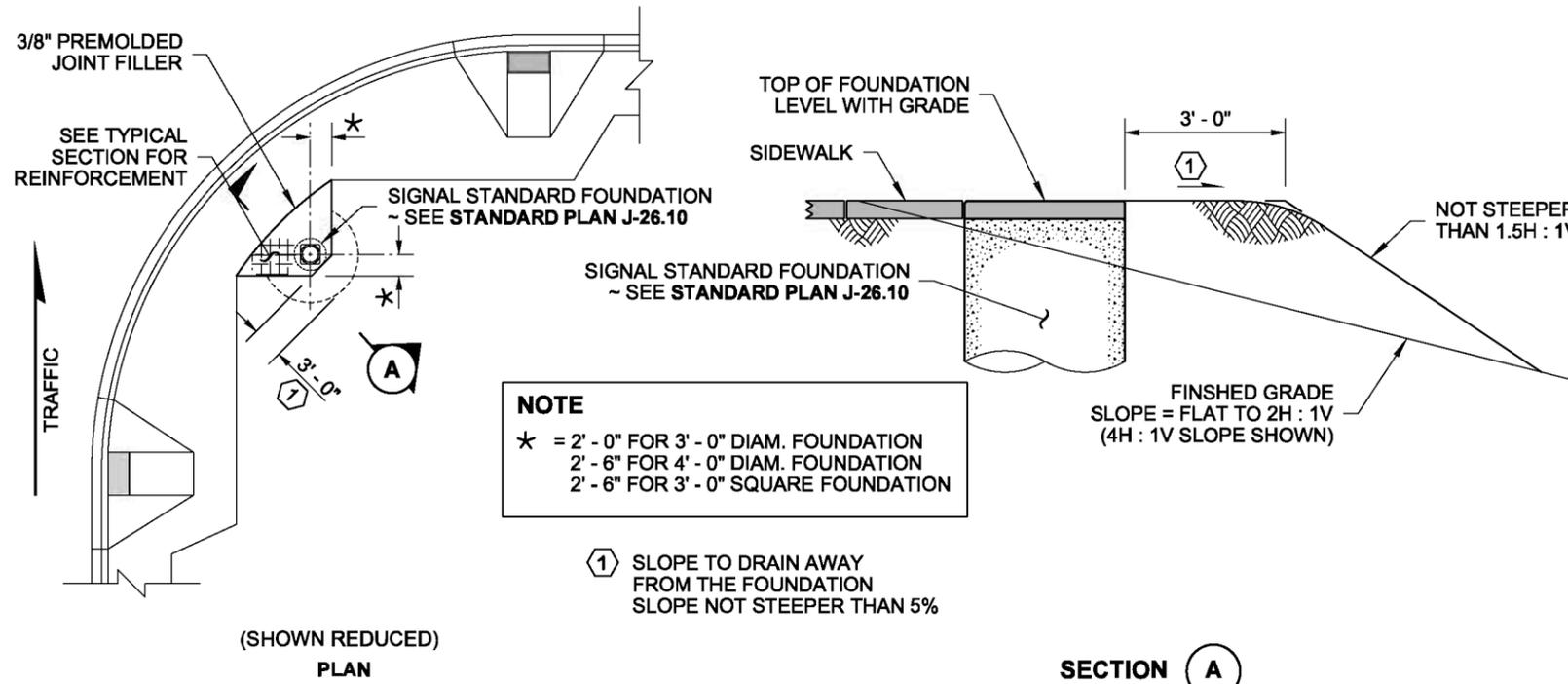
TRAFFIC SIGNAL STANDARD FOUNDATION

STANDARD PLAN J-26.10-03

SHEET 1 OF 1 SHEET

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Carpenter, Jeff
Jul 21 2016 8:27 AM

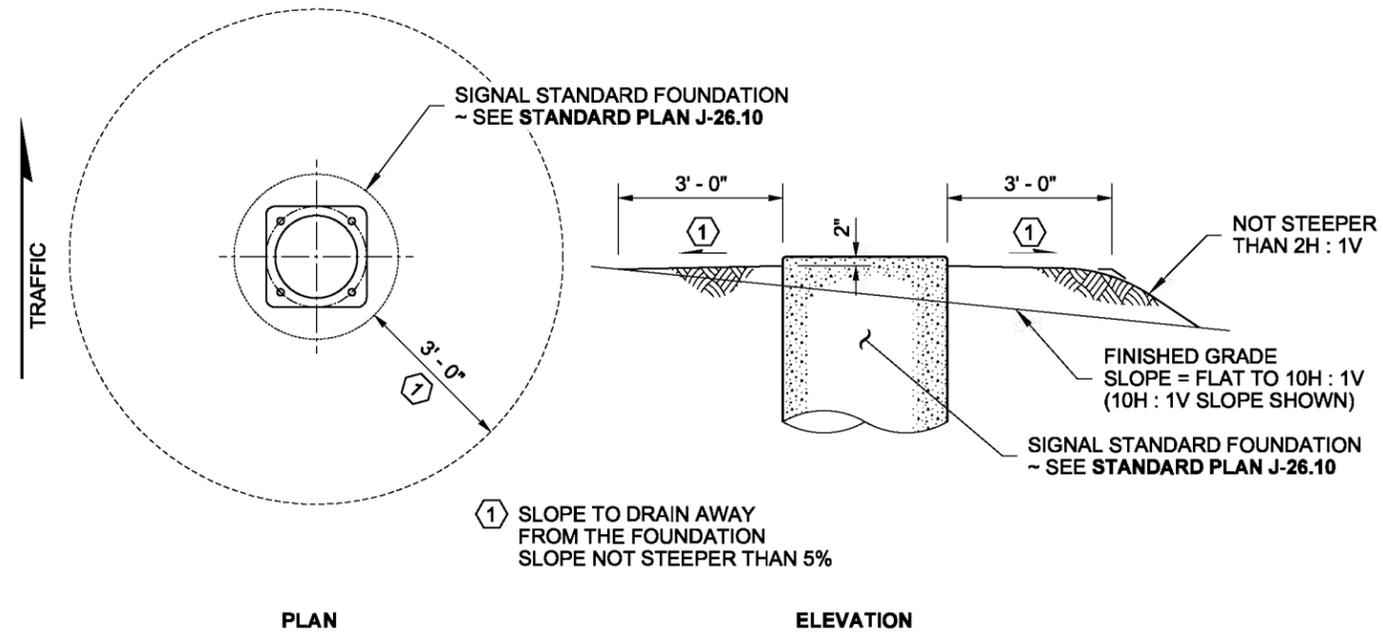
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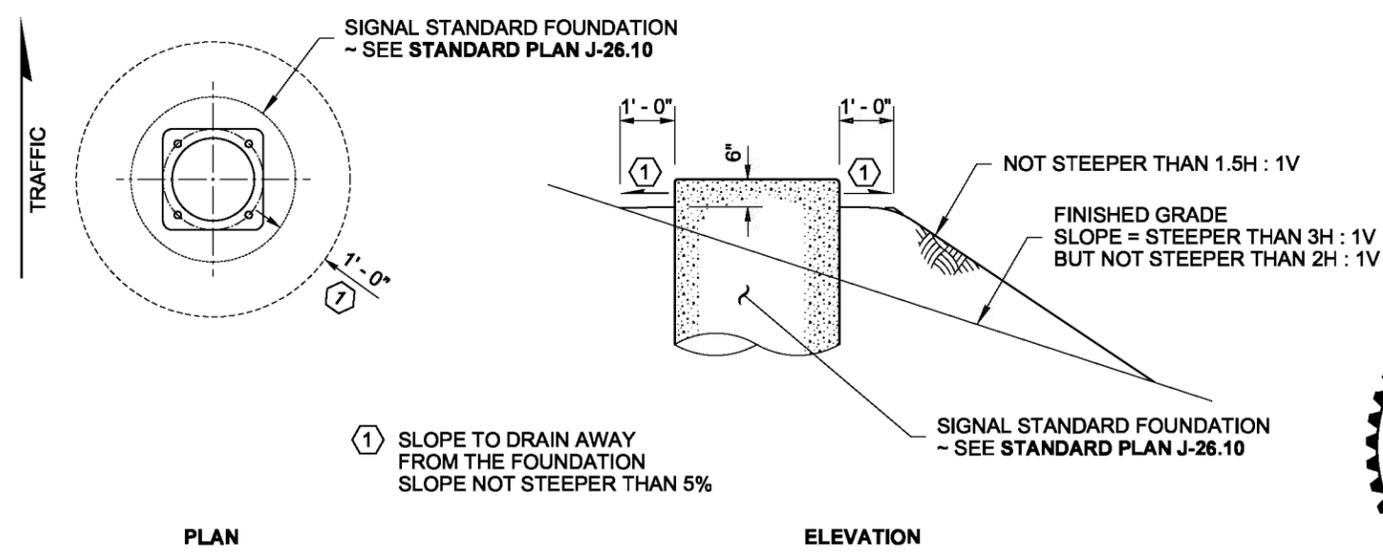
NOTE
 * = 2'-0" FOR 3'-0" DIAM. FOUNDATION
 2'-6" FOR 4'-0" DIAM. FOUNDATION
 2'-6" FOR 3'-0" SQUARE FOUNDATION

① SLOPE TO DRAIN AWAY FROM THE FOUNDATION SLOPE NOT STEEPER THAN 5%

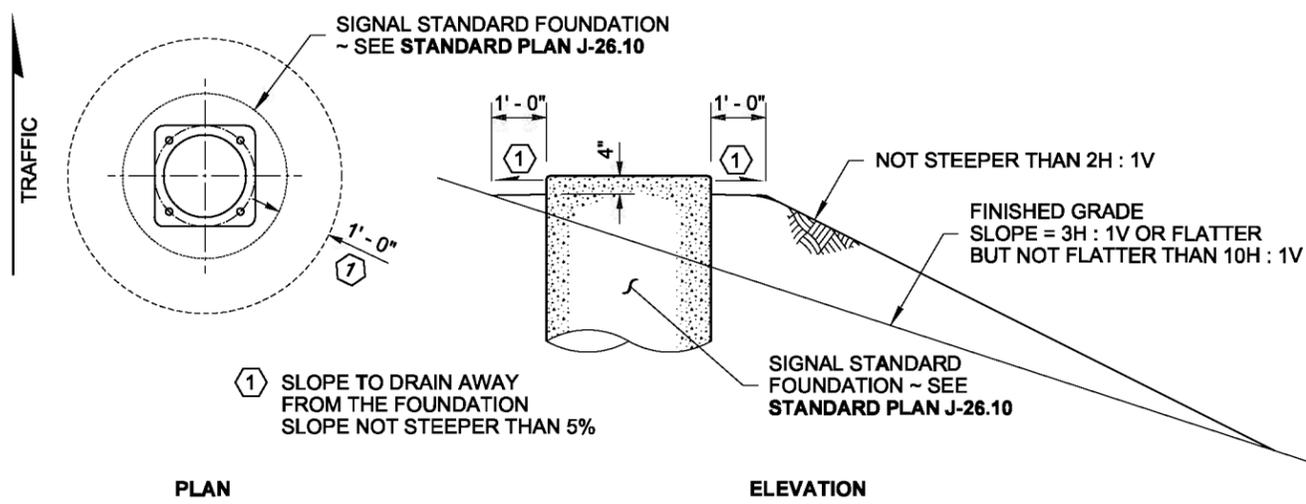
FOUNDATION IN OR NEAR SIDEWALK CASE A



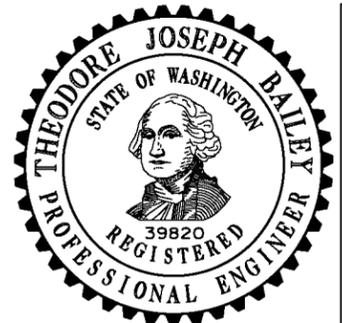
EXISTING GRADE OR FILL SLOPE = FLAT TO 10H : 1V CASE B



EXISTING GRADE OR FILL SLOPE = > 3H : 1V TO 2H : 1V CASE D



EXISTING GRADE OR FILL SLOPE = 10H : 1V TO ≤ 3H : 1V CASE C



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SIGNAL STANDARD FOUNDATION PLACEMENTS
STANDARD PLAN J-26.15-01

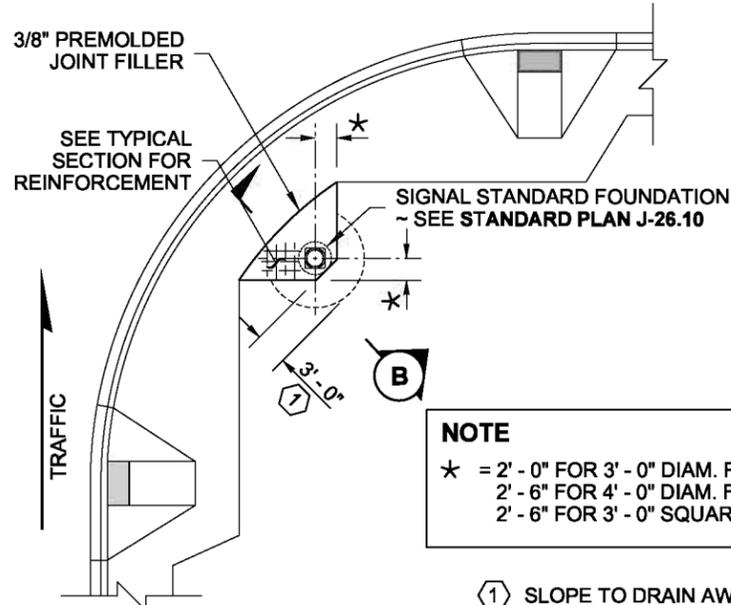
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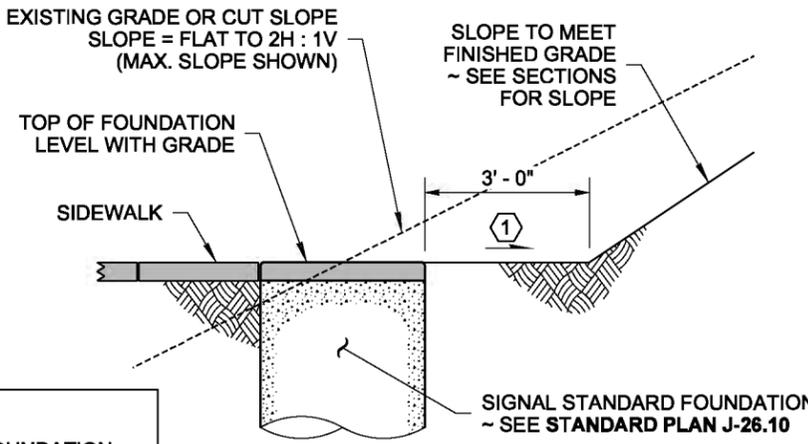


NOTE
 * = 2'-0" FOR 3'-0" DIAM. FOUNDATION
 2'-6" FOR 4'-0" DIAM. FOUNDATION
 2'-6" FOR 3'-0" SQUARE FOUNDATION

① SLOPE TO DRAIN AWAY FROM THE FOUNDATION
 SLOPE NOT STEEPER THAN 5%

(SHOWN REDUCED)
 PLAN

**FOUNDATION IN OR NEAR SIDEWALK
 CASE E**

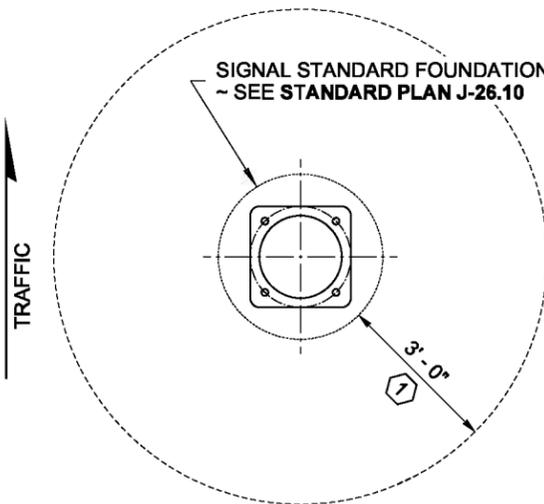


NOTE
 * = 2'-0" FOR 3'-0" DIAM. FOUNDATION
 2'-6" FOR 4'-0" DIAM. FOUNDATION
 2'-6" FOR 3'-0" SQUARE FOUNDATION

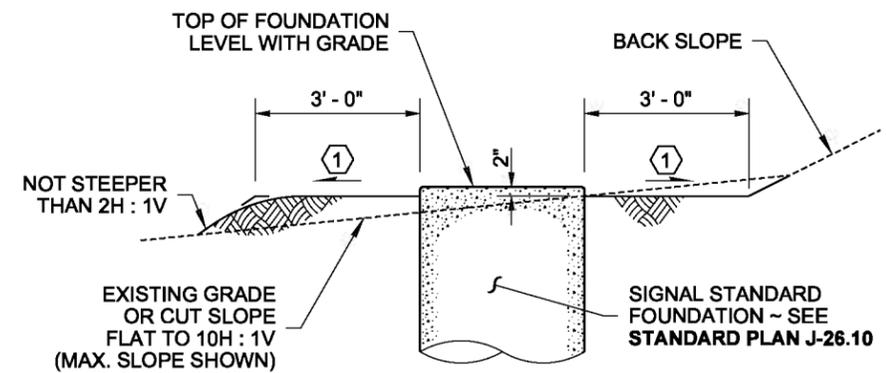
① SLOPE TO DRAIN AWAY FROM THE FOUNDATION
 SLOPE NOT STEEPER THAN 5%

(SHOWN REDUCED)
 PLAN

**FOUNDATION IN OR NEAR SIDEWALK
 CASE E**



PLAN

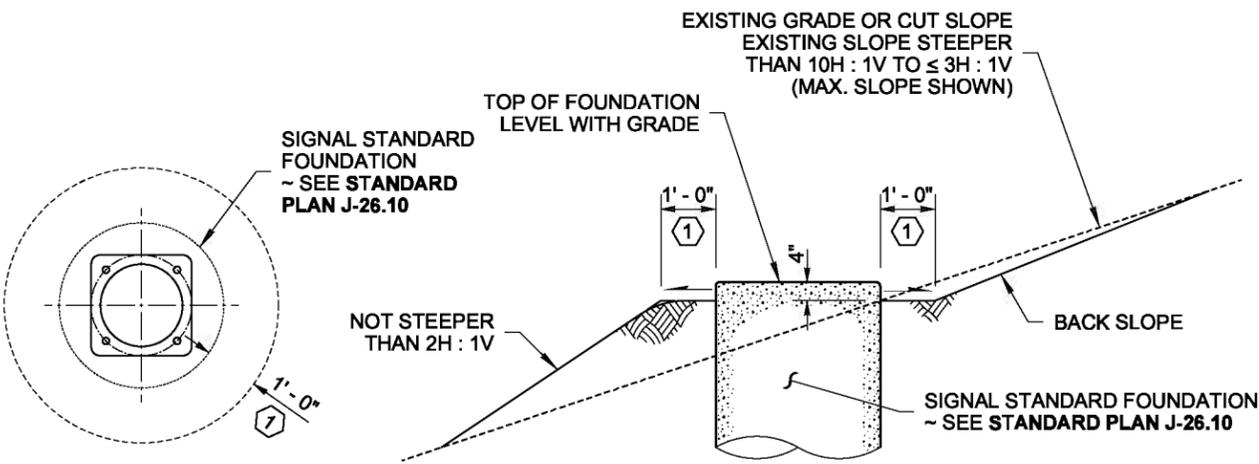


① SLOPE TO DRAIN AWAY FROM THE FOUNDATION
 SLOPE NOT STEEPER THAN 5%

ELEVATION

**EXISTING GRADE OR CUT SLOPE FLAT TO 10H : 1V
 CASE F**

DRAWN BY: LISA CYFORD

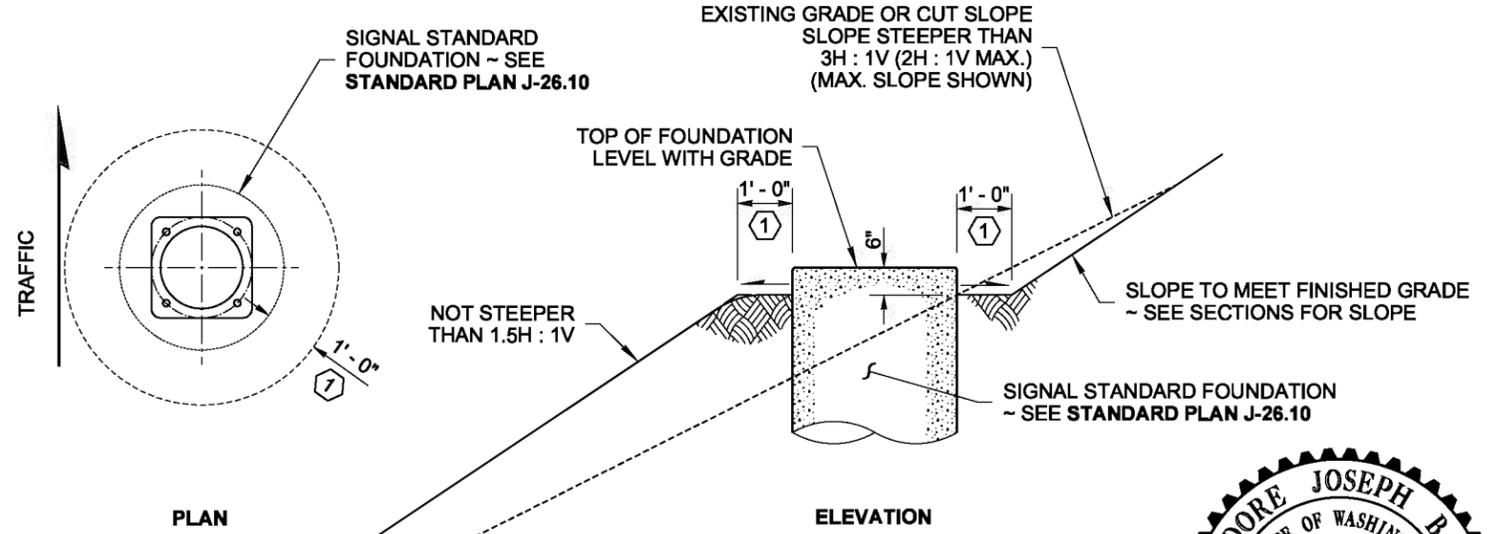


① SLOPE TO DRAIN AWAY FROM THE FOUNDATION
 SLOPE NOT STEEPER THAN 5%

PLAN

ELEVATION

**EXISTING GRADE OR CUT SLOPE 10H : 1V TO ≤ 3H : 1V
 CASE G**

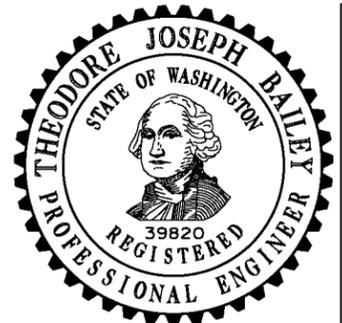


① SLOPE TO DRAIN AWAY FROM THE FOUNDATION
 SLOPE NOT STEEPER THAN 5%

PLAN

ELEVATION

**EXISTING GRADE OR CUT SLOPE STEEPER THAN 3H : 1V (2H : 1V MAX.)
 CASE H**



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**SIGNAL STANDARD
 FOUNDATION PLACEMENTS
 STANDARD PLAN J-26.15-01**

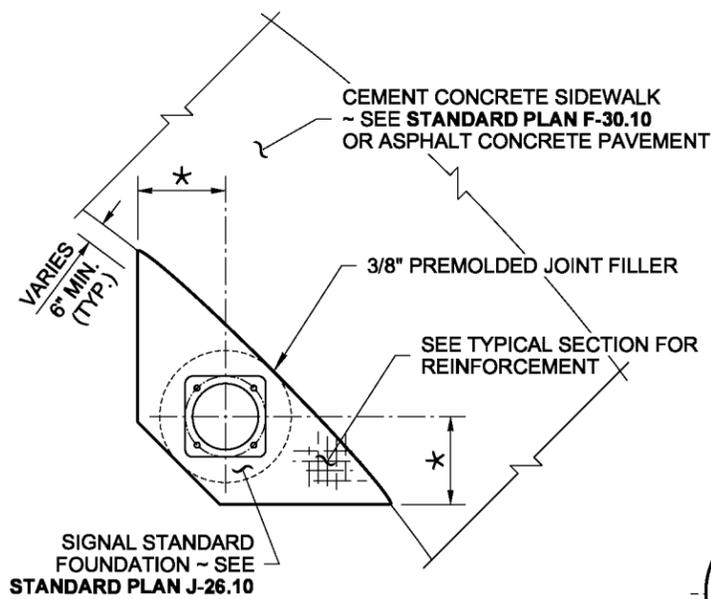
SHEET 2 OF 3 SHEETS

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Pasco Bakotich III 05/17/12
 STATE DESIGN ENGINEER DATE

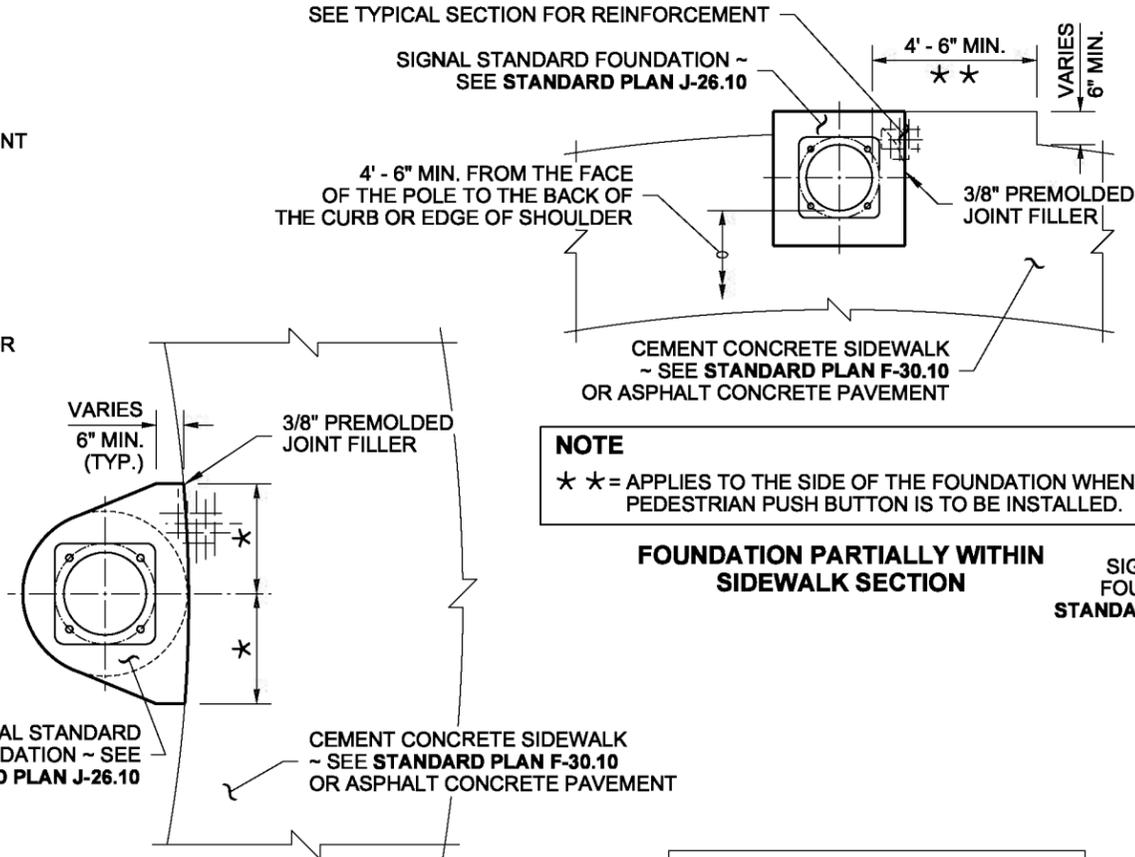


DRAWN BY: LISA CYFORD



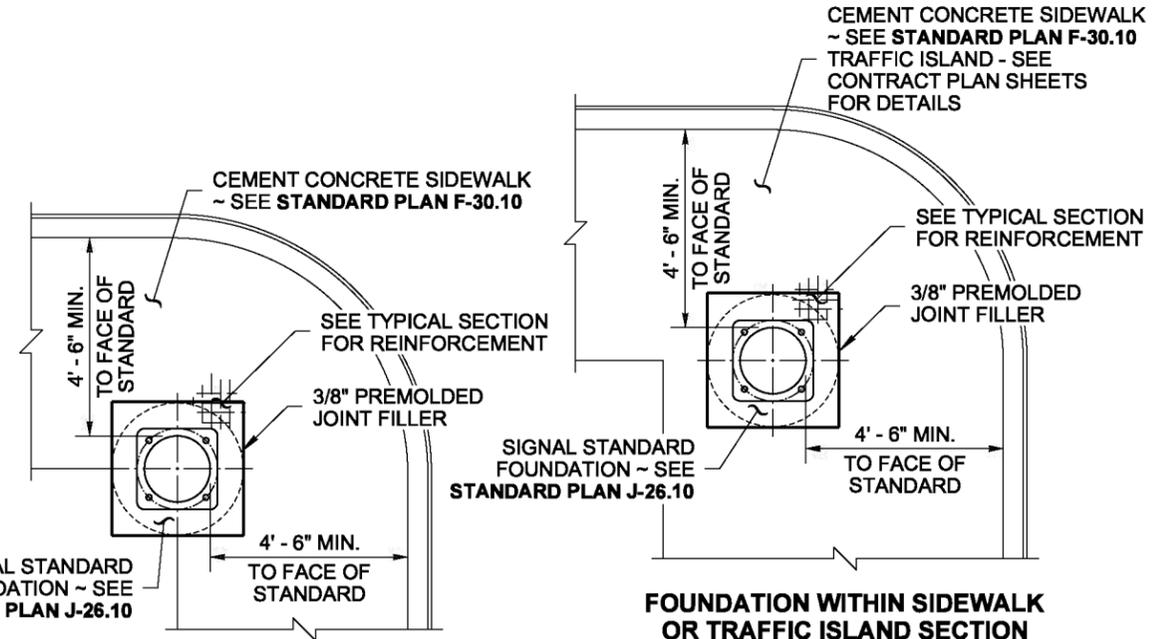
DUAL PEDESTRIAN PUSH BUTTON

NOTE
 * = 2' - 0" FOR 3' - 0" DIAM. FOUNDATION
 2' - 6" FOR 4' - 0" DIAM. FOUNDATION
 2' - 6" FOR 3' - 0" SQUARE FOUNDATION



FOUNDATION PARTIALLY WITHIN SIDEWALK SECTION

NOTE
 * * = APPLIES TO THE SIDE OF THE FOUNDATION WHEN PEDESTRIAN PUSH BUTTON IS TO BE INSTALLED.



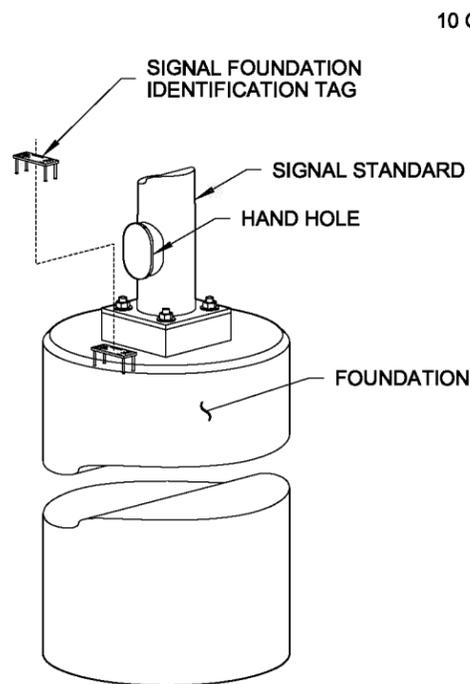
FOUNDATION WITHIN SIDEWALK OR TRAFFIC ISLAND SECTION

NOTE

REFER TO CONTRACT DOCUMENTS FOR PROJECT SPECIFIC INTERSECTION LAYOUTS & TRAFFIC ISLAND MATERIAL TYPE

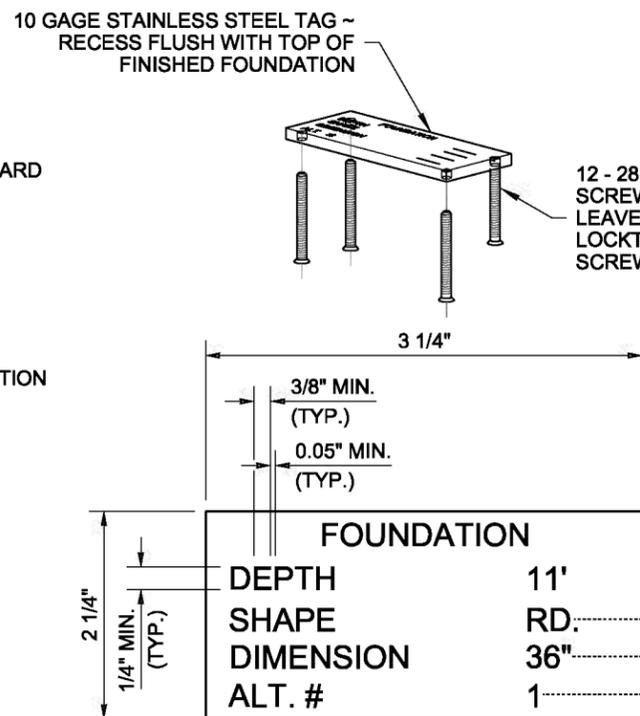
FOUNDATION PARTIALLY WITHIN SIDEWALK SECTION

FOUNDATION OUTSIDE THE SIDEWALK SECTION



OBLIQUE VIEW

REINFORCING AND ANCHOR BOLTS NOT SHOWN FOR CLARITY (GROUT PAD OPTION SHOWN)



SIGNAL FOUNDATION IDENTIFICATION TAG DETAIL

TEXT SHALL BE ENGRAVED 0.014" DEEP

FOUNDATION	
DEPTH	11'
SHAPE	RD. SQUARE OR ROUND
DIMENSION	36" DIAMETER OR WIDTH
ALT. #	1 ALTERNATE 1 OR 2 ~ SEE STANDARD PLAN J-26.10

APPLY GROUT EVEN WITH THE BOTTOM OF THE ANCHOR PLATE AFTER PLUMBING THE STANDARD
 PROVIDE 3/8" DIAMETER DRAIN TUBE IN THE GROUT PAD

WWF 4 x 4 - W 2.9 x 2.9 AT CENTER OF EXTENDED SIDE WALK AT SIGNAL STANDARD FOUNDATION

12 - 28 (NF) x 2" LONG STAINLESS STEEL SCREW ~ DRILL AND TAP FROM BOTTOM, LEAVE SCREW FLUSH WITH TOP. APPLY LOCKTITE TO SCREW THREADS TO BIND SCREWS AND I.D. TAG TOGETHER

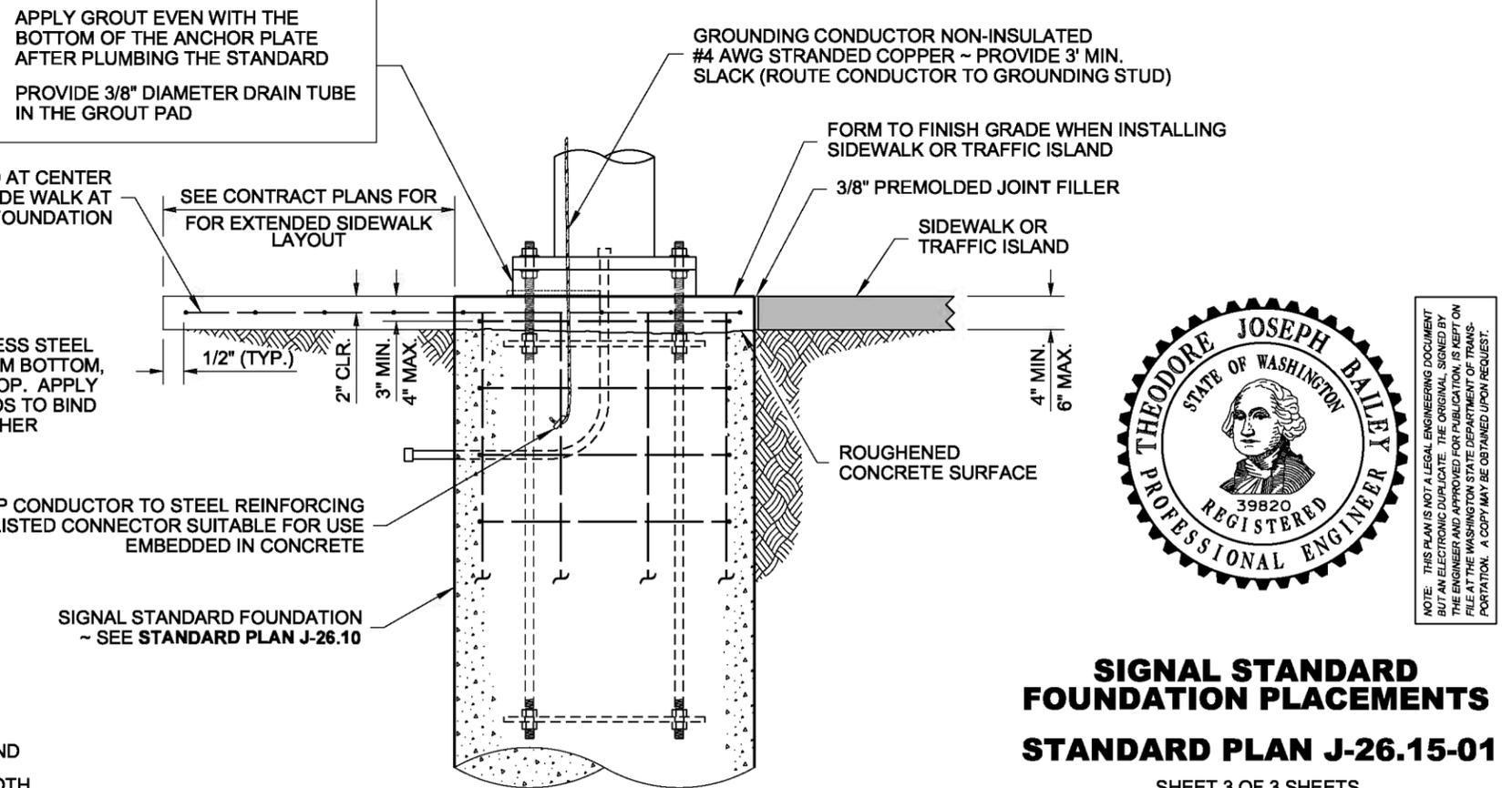
CLAMP CONDUCTOR TO STEEL REINFORCING WITH LISTED CONNECTOR SUITABLE FOR USE EMBEDDED IN CONCRETE

SIGNAL STANDARD FOUNDATION ~ SEE STANDARD PLAN J-26.10

NOTE

FOUNDATION REINFORCING ONLY PARTIALLY SHOWN FOR CLARITY. ~ SEE STANDARD PLAN J-26.10 FOR DETAILS NOT SHOWN.

TYPICAL SECTION



NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT UNTIL ELECTRONICALLY SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION. IT IS TO BE FILED AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

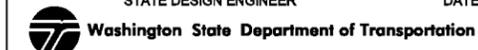
SIGNAL STANDARD FOUNDATION PLACEMENTS
STANDARD PLAN J-26.15-01

SHEET 3 OF 3 SHEETS

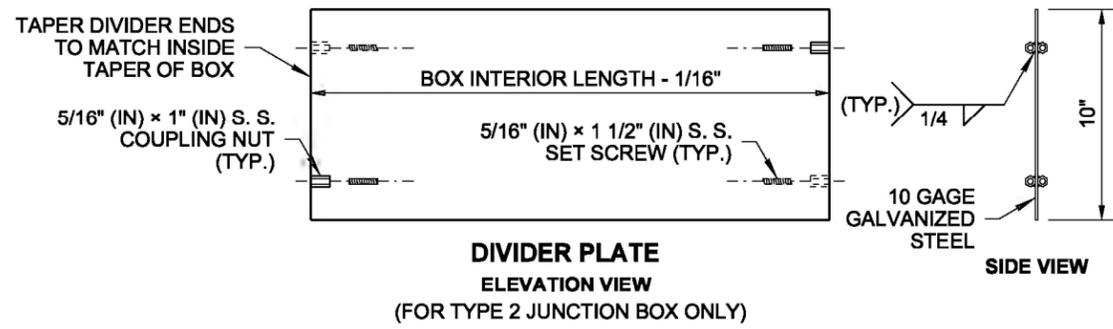
APPROVED FOR PUBLICATION

Pasco Bakotich III 05/17/12

STATE DESIGN ENGINEER DATE



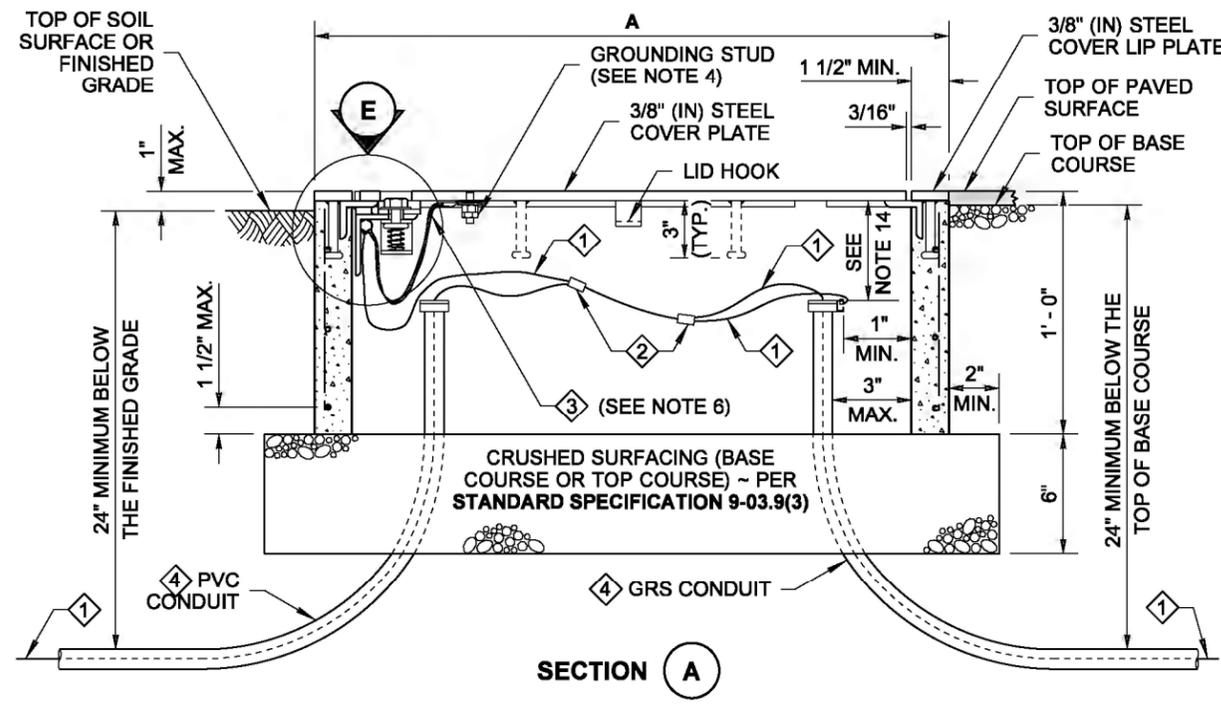
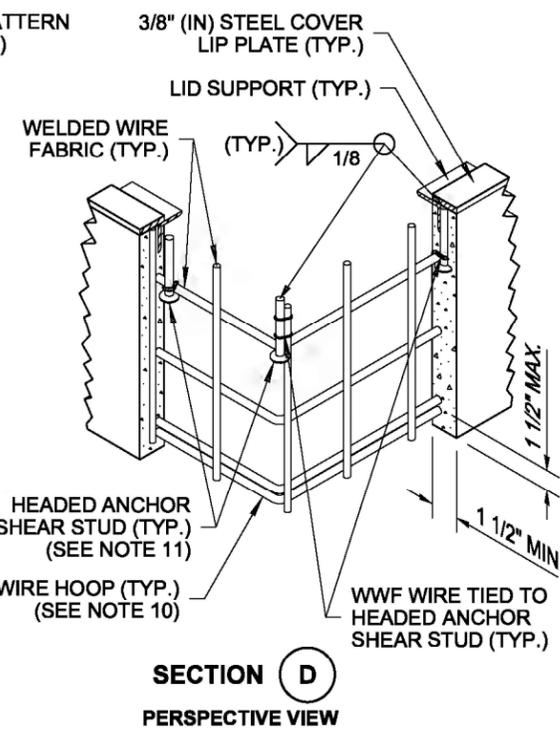
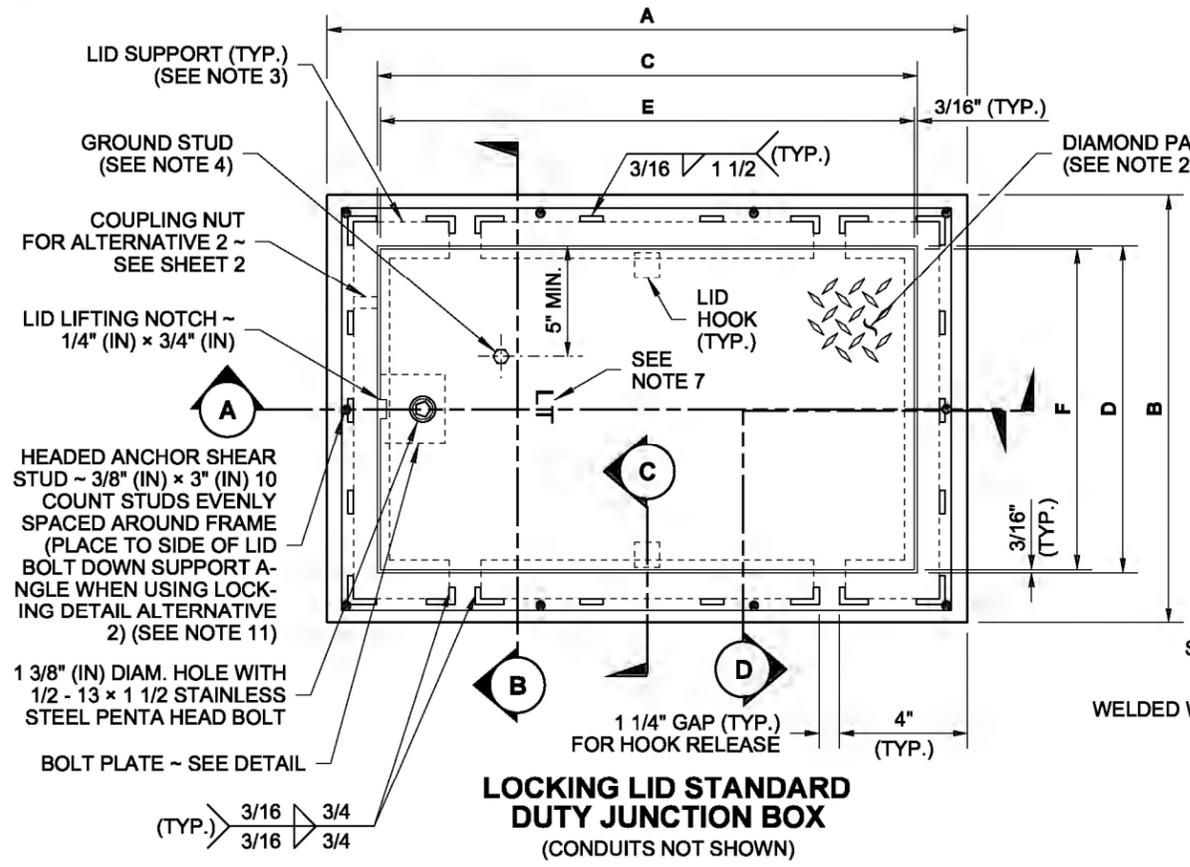
DRAWN BY: LISA CYFORD



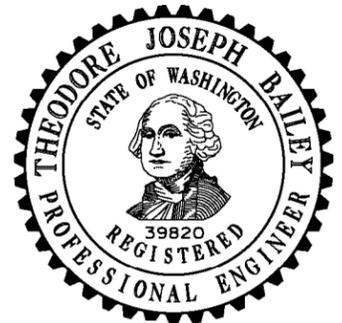
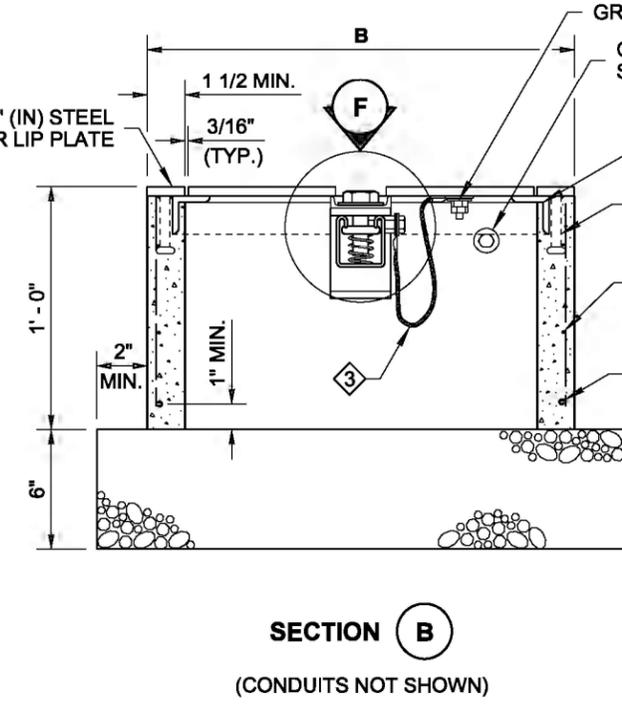
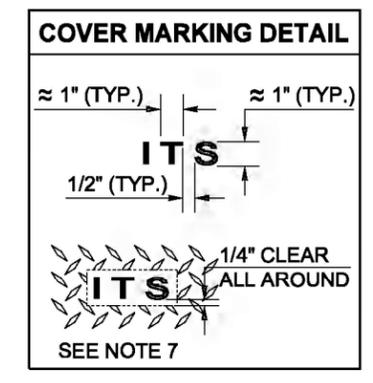
JUNCTION BOX DIMENSION TABLE			
MARK	ITEM	BOX TYPE	
		TYPE 1	TYPE 2
A	OUTSIDE LENGTH OF JUNCTION BOX	22"	33"
B	OUTSIDE WIDTH OF JUNCTION BOX	17"	22 1/2"
C	INSIDE LENGTH OF JUNCTION BOX	18" ~ 19"	28" ~ 29"
D	INSIDE WIDTH OF JUNCTION BOX	13" ~ 14"	17" ~ 18"
E	LID LENGTH	17 5/8"	28 5/8"
F	LID WIDTH	12 5/8"	18 1/8"
CAPACITY ~ CONDUIT DIAMETER		6"	12"

NOTES

- All box dimensions are approximate. Exact configurations vary among manufacturers.
- Minimum lid thickness shown. Junction Boxes installed in sidewalks, walkways, and shared-use paths shall have a slip-resistant coating on the lid and lip cover plate, and shall be installed with the surface flush with and matched to the grade of the sidewalk, walkway, or shared-use path. The non-slip lid shall be identified with permanent markings on the underside, indicating the type of surface treatment (see Contract Documents for details) and the year of manufacture. The permanent marking shall be 1/8" (in) line thickness formed with a mild steel weld bead and shall be placed prior to hot-dip galvanizing.
- Lid support members shall be 3/16" (in) minimum thick steel C, L, or T shape, welded to the frame.
- A 1/4-20 NC x 3/4" (in) stainless steel ground stud shall be welded to the bottom of the lid; include (2) stainless steel nuts and (2) stainless steel flat washers.
- Bolts and nuts shall be liberally coated with anti-seize compound.
- Equipment Bonding Jumper shall be # 8 AWG min. x 4' (ft) of tinned braided copper.
- The System Identification letters shall be 1/8" (in) line thickness formed with a mild steel weld bead. See Cover Marking detail. Grind off diamond pattern before forming letters. For System Identification details, see **Standard Specification 9-29.2(4)**.
- When required in the Contract, provide a 10" (in) x 27 1/2" (in), 10 gage divider plate, complete, with fasteners, in each Type 2 Junction Box where specified.
- When required in Contract, provide a 12" (in) deep extension for each Type 2 Junction Box where specified.
- See the **Standard Specifications** for alternative reinforcement and class of concrete.
- Headed Anchor Shear Studs must be welded to the Steel Cover Lip Plate and wire tied in two places to the vertical Welded Wire Fabric when in contact with each other. Wire tie all other Headed Anchor Shear Studs to the horizontal Welded Wire Fabric.
- Lid Bolt Down Attachment Tab provides a method of retrofitting by using a mechanical process in lieu of welding. Attachment Tab shown depicts a typical component arrangement; actual configurations of assembly will vary among manufacturers. See approved manufacturers' shop drawings for specifics.
- Unless otherwise noted in the plans or approved by the Engineer, Junction Boxes, Cable Vaults, and Pull Boxes shall not be placed within the sidewalks, walkways, shared use paths, traveled ways or paved shoulders. All Junction Boxes, Cable Vaults, and Pull Boxes placed within the traveled way or paved shoulders shall be Heavy-Duty.
- Distance between the top of the conduit and the bottom of the Junction Box lid shall be 6" (in) min. to 8" (in) max. for final grade of new construction only. See **Standard Specification 8-20.3(5)**. Where adjustments are to be made to existing Junction Boxes, or for interim construction stages during the contract, the limits shall be from 6" (in) min. to 10" (in) max. See **Standard Specification 8-20.3(6)**.



- Equipment Grounding Conductor
- Copper Solderless Crimp Connector
- Equipment Bonding Jumper (See Note 6)
- See Contract for conduit size and number



**LOCKING LID STANDARD
DUTY JUNCTION BOX
TYPES 1 & 2
STANDARD PLAN J-40.10-04**

SHEET 1 OF 2 SHEETS

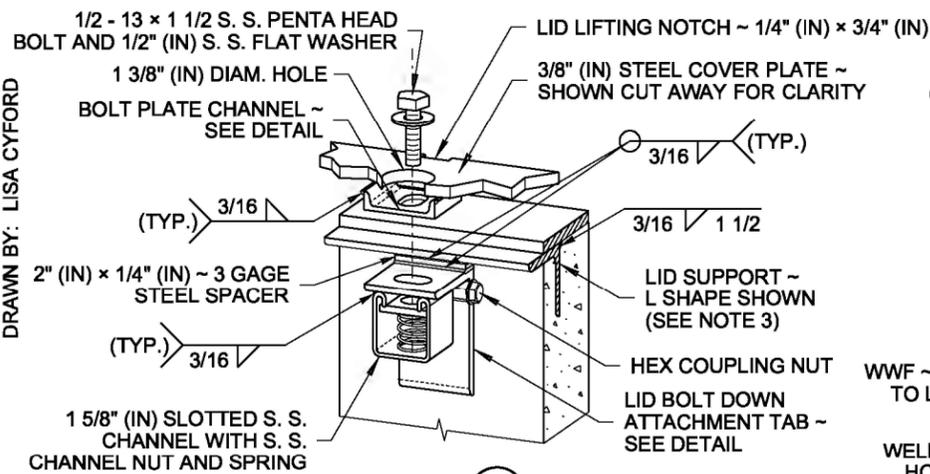
APPROVED FOR PUBLICATION

Carpenter, Jeff Carpenter, Jeff
Apr 28 2016 3:12 PM

STATE DESIGN ENGINEER

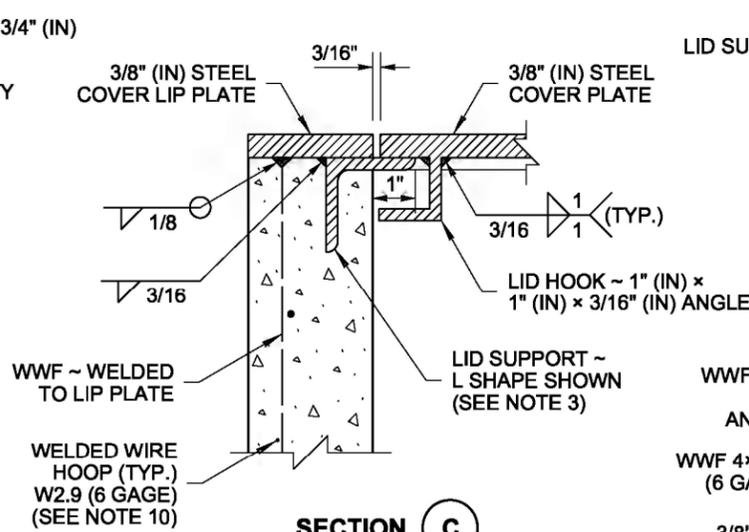
Washington State Department of Transportation

DRAWN BY: LISA CYFORD

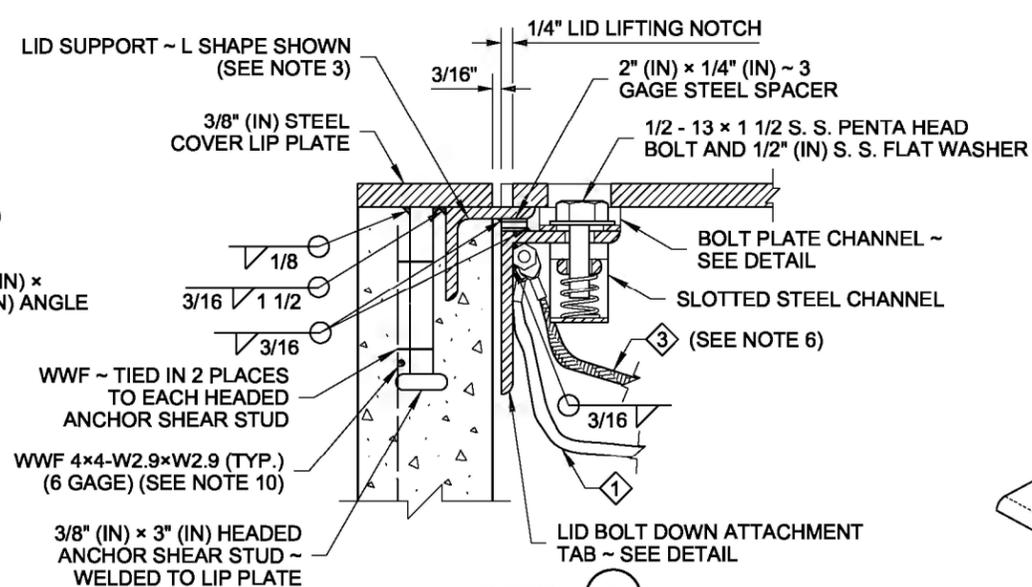


DETAIL F

ALTERNATIVE 1 SHOWN PERSPECTIVE VIEW

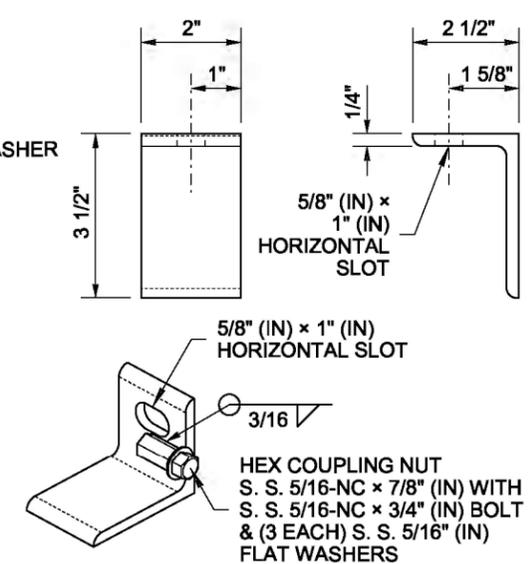


SECTION C

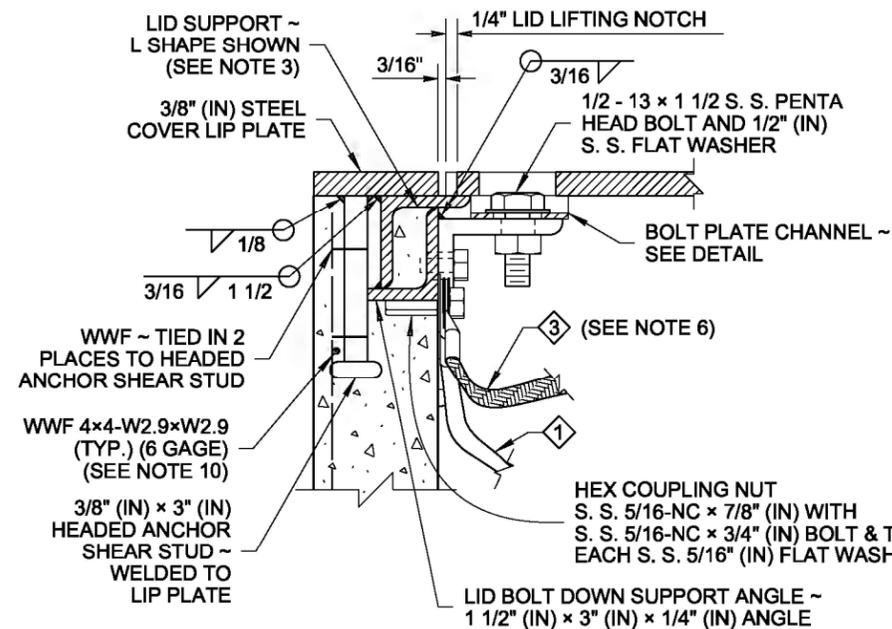


DETAIL E

ALTERNATIVE 1 SHOWN

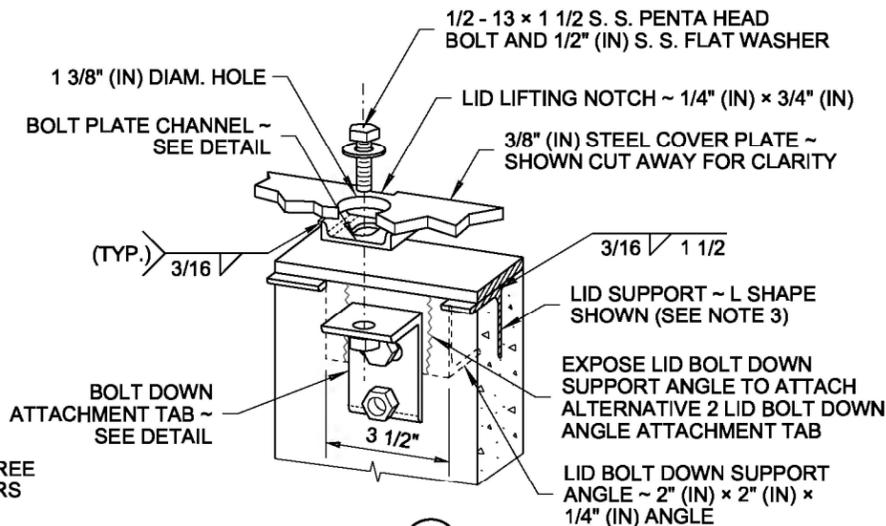


ALTERNATIVE 1 LID BOLT DOWN ATTACHMENT TAB (SEE NOTE 12)



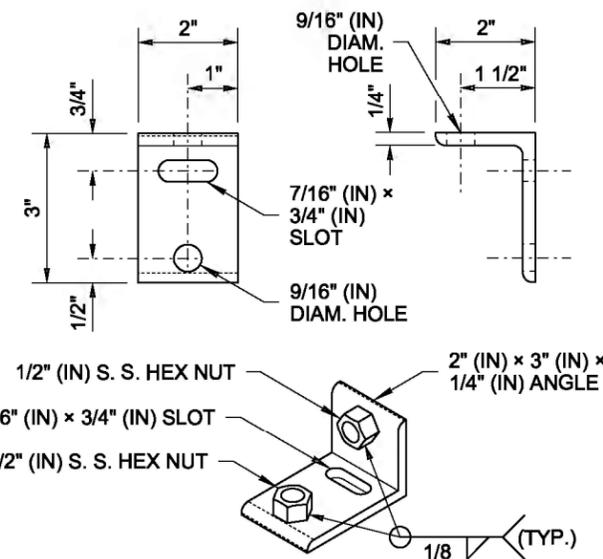
DETAIL E

ALTERNATIVE 2 SHOWN

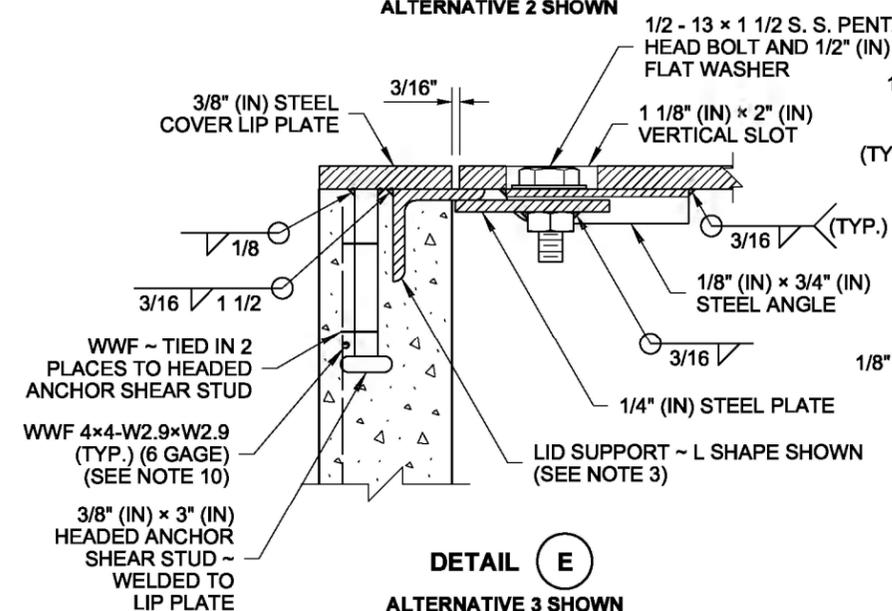


DETAIL F

ALTERNATIVE 2 SHOWN PERSPECTIVE VIEW

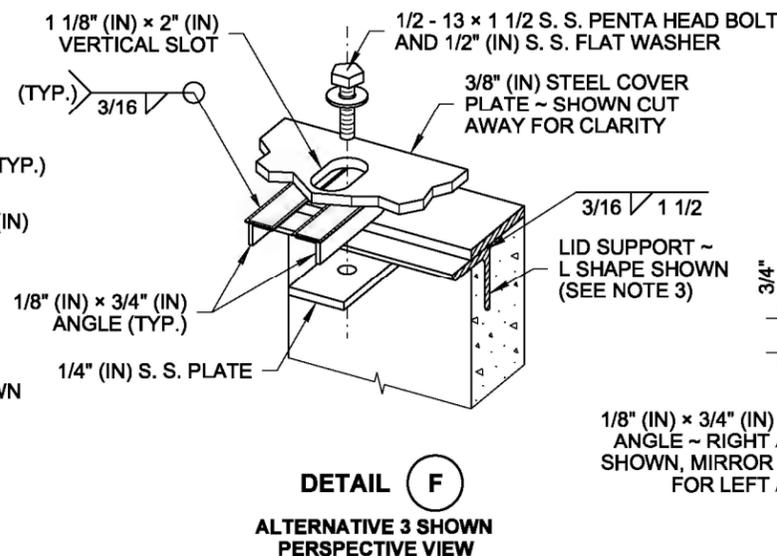


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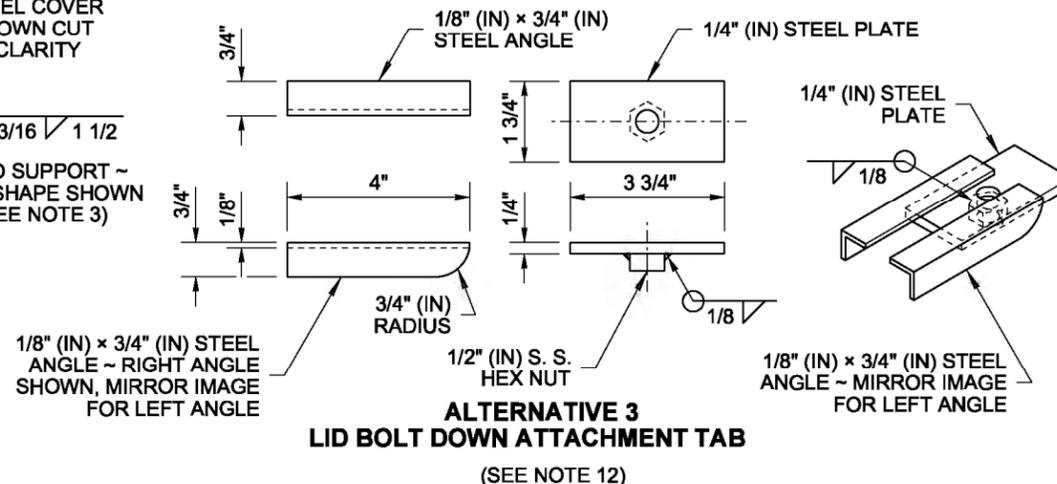
DETAIL E

ALTERNATIVE 3 SHOWN

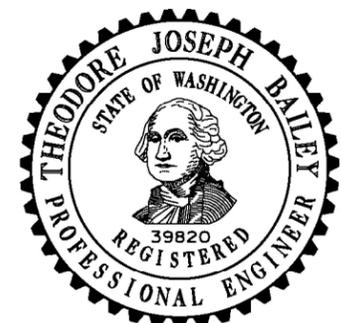


DETAIL F

ALTERNATIVE 3 SHOWN PERSPECTIVE VIEW



ALTERNATIVE 3 LID BOLT DOWN ATTACHMENT TAB (SEE NOTE 12)



THEODORE JOSEPH BAILEY
STATE OF WASHINGTON
REGISTERED ENGINEER
39820

Theodore Joseph Bailey
Bailey, Ted
Apr 25 2016 9:33 AM

LOCKING LID STANDARD DUTY JUNCTION BOX TYPES 1 & 2
STANDARD PLAN J-40.10-04

SHEET 2 OF 2 SHEETS

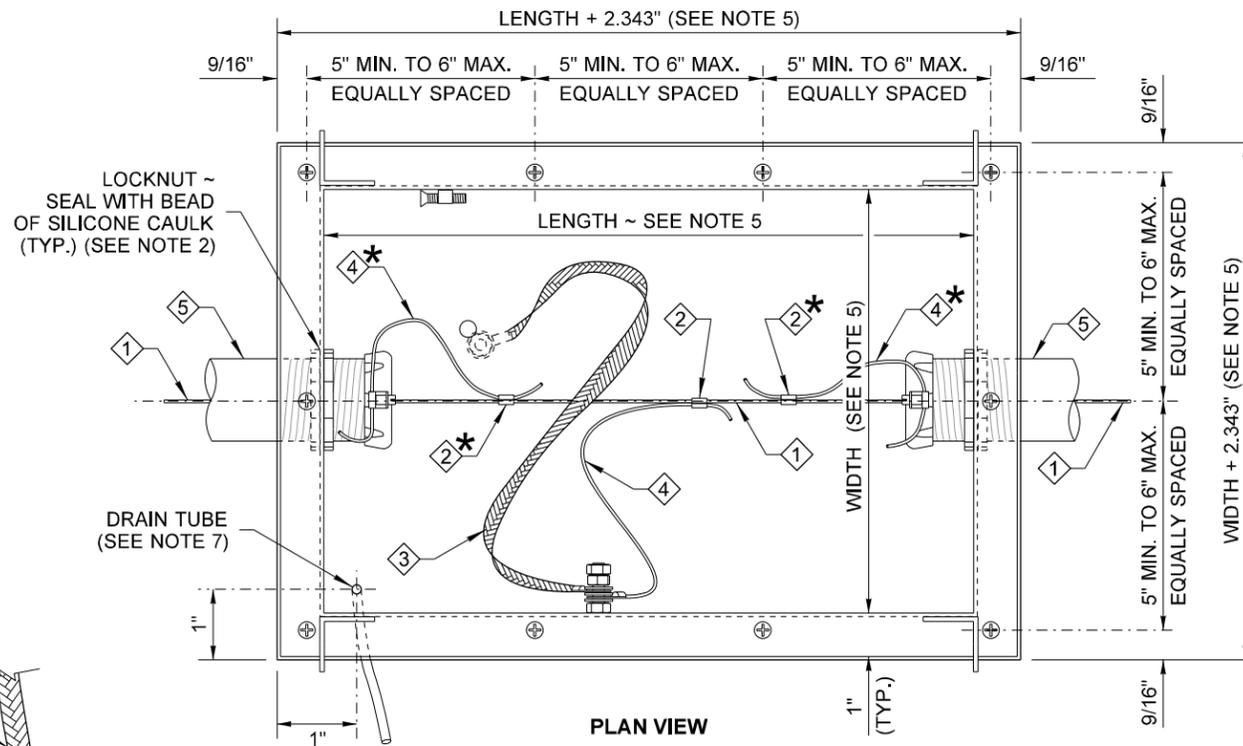
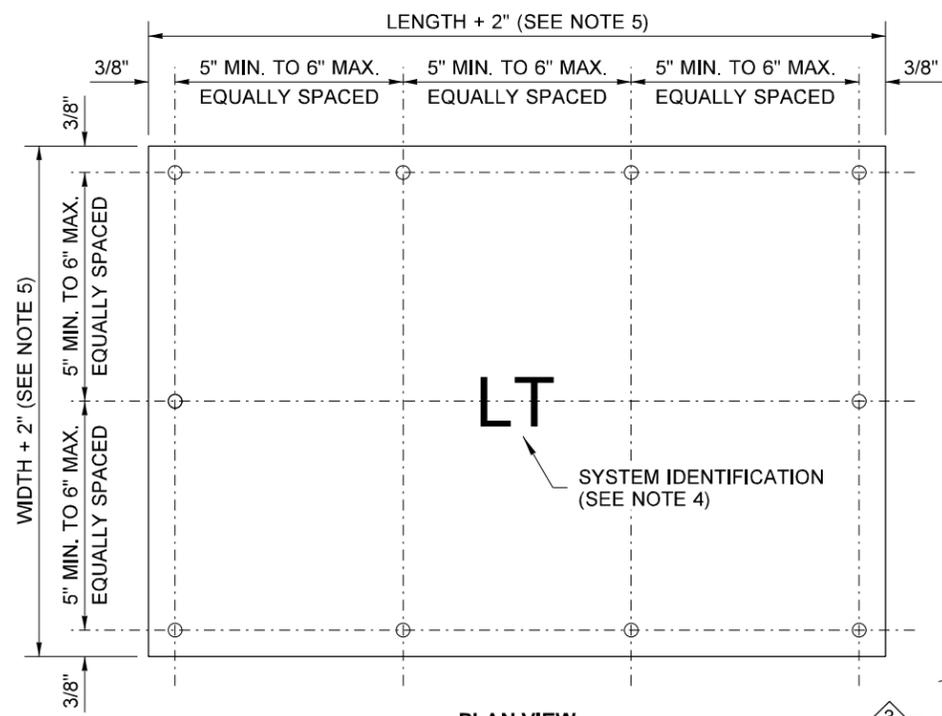
APPROVED FOR PUBLICATION

Carpenter, Jeff
Carpenter, Jeff
Apr 28 2016 3:12 PM

STATE DESIGN ENGINEER

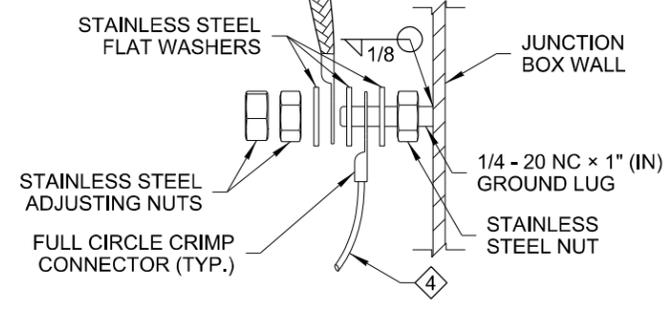
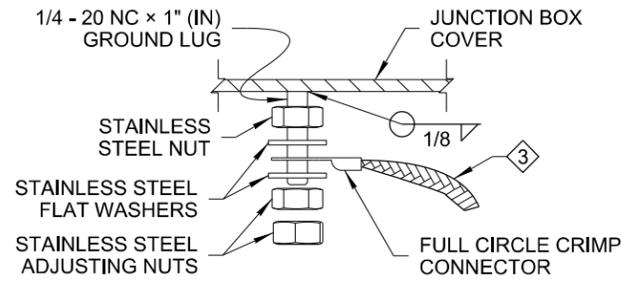
Washington State Department of Transportation

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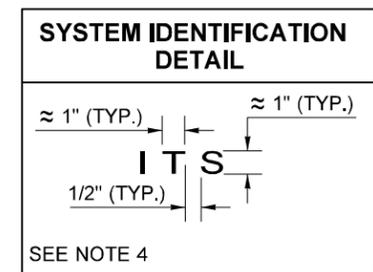
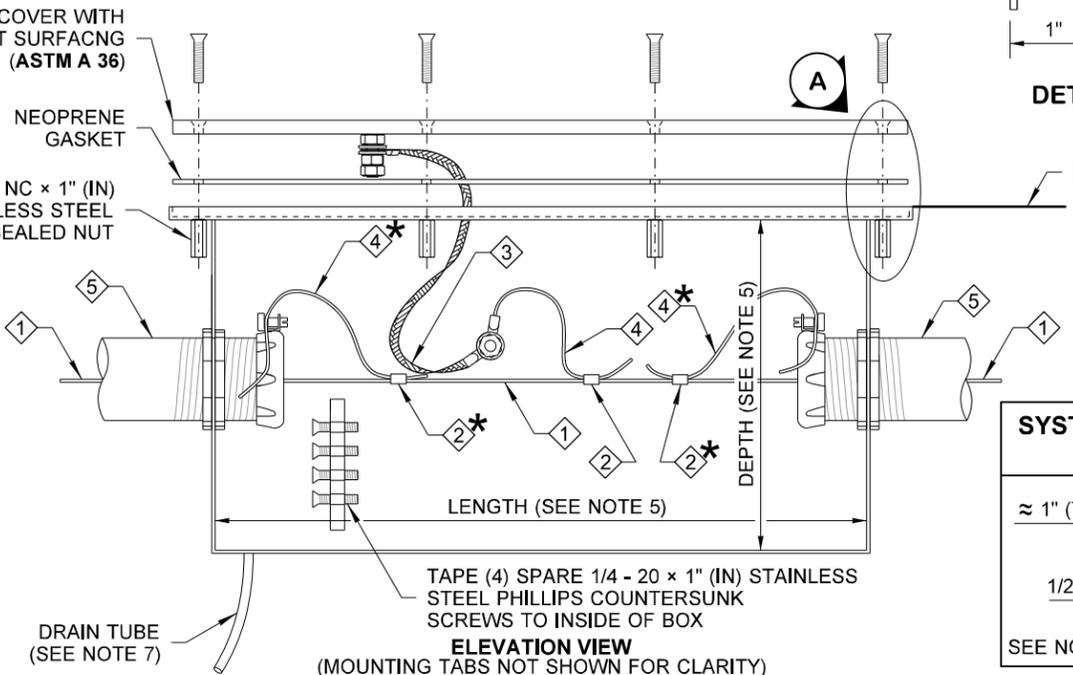
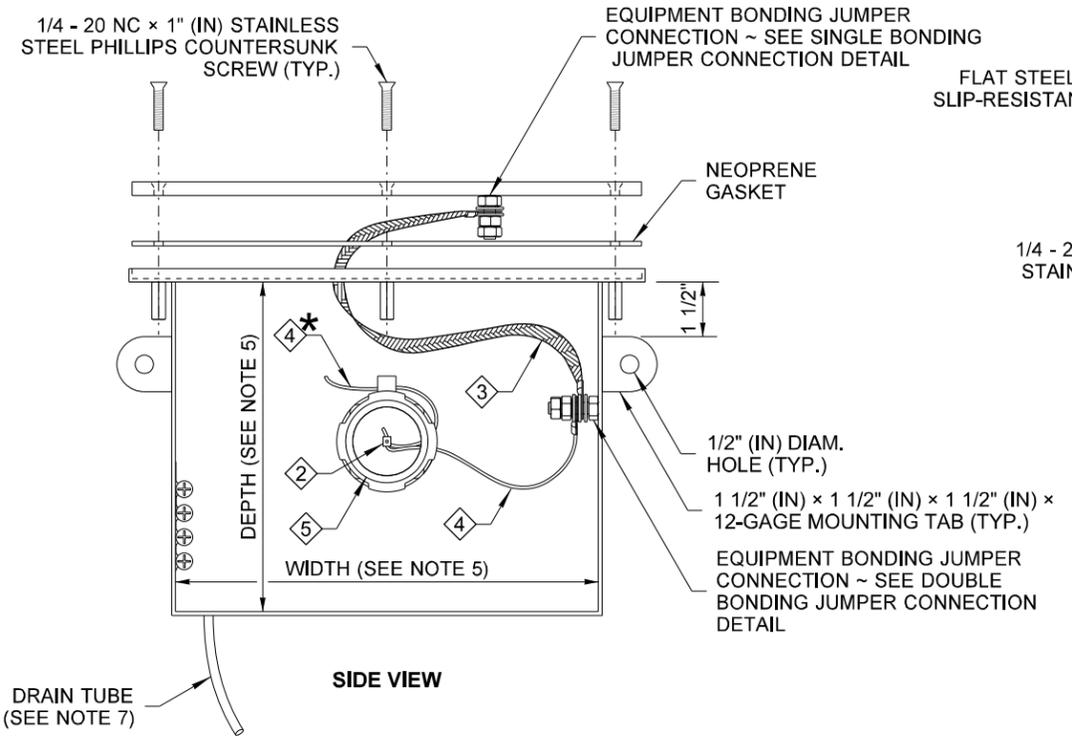
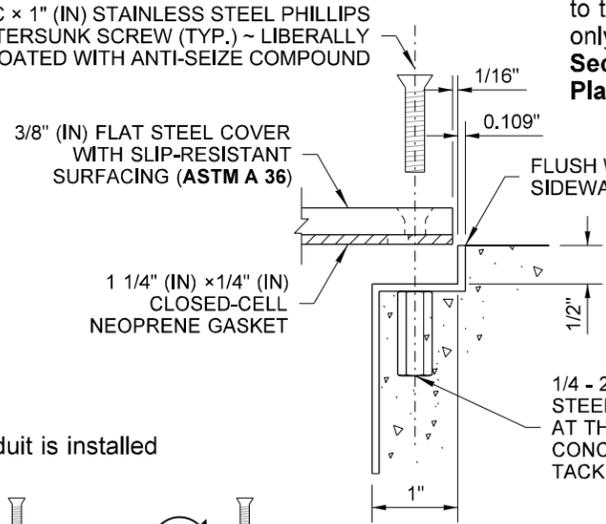
NOTES

1. Junction Box shall be constructed of 12-gage, Type 304 stainless steel with welded seam construction. Mounting Tabs shall be constructed of 12-gage, Type 304 stainless steel. Cover shall be constructed of **ASTM A 36** steel with slip-resistant surfacing.
2. Fittings shall be UL listed and CSA-certified concrete tight on the outside of the Junction Box connection. Use an insulated, grounding end bushing on the inside for Rigid Metal Conduit.
3. Equipment Bonding Jumper shall be # 8 AWG (min.) x 3 feet minimum of tinned, braided copper.
4. The System Identification letters shall be 1/8" (in) line thickness formed by a mild steel weld bead. See **Standard Specification, Section 9-29.2(4)**.
5. Junction Box shall be dimensioned as shown in the Contract. If the conduit sizes shown in the Contract are changed, the box dimensions shall be revised in accordance with **NEC 314.28** using the 8 times multiplier for length and width dimension.
 - Maximum Height = Sidewalk Depth
 - Maximum Interior Length = 29" (in)
 - Maximum Interior Width = 18" (in)
6. See **Standard Plan J-40.36** for additional requirements.
7. Field drill 1/2" (in) diameter hole for Drain Tube from the inside to the outside of Junction Box. One place, on the lowest side only. Seal with bead of silicone. See **Standard Specification, Section 9-29.2(3)**. For drain tube routing, see **Standard Plan J-50.16**.
8. Conduit capacity is 12" (in) ~ 4" (in) per side.
9. Conduits shall enter through the sides as shown. Conduits shall not enter through the bottom of Junction Box.
10. Liberally coat the threads of the cover fasteners with anti-seize compound during construction and before final closure.



- ① Equipment Grounding Conductor
- ② Copper Solderless Crimp Connector
- ③ Equipment Bonding Jumper (See Note 3)
- ④ Equipment Bonding Jumper
- ⑤ See Contract for conduit size and number

* = Omit when non-RMC conduit is installed



Jackson, Flint
Jul 29 2019 2:55 PM

NEMA 4X JUNCTION BOX IN SIDEWALK LOCATED ON STRUCTURE

STANDARD PLAN J-40.40-02

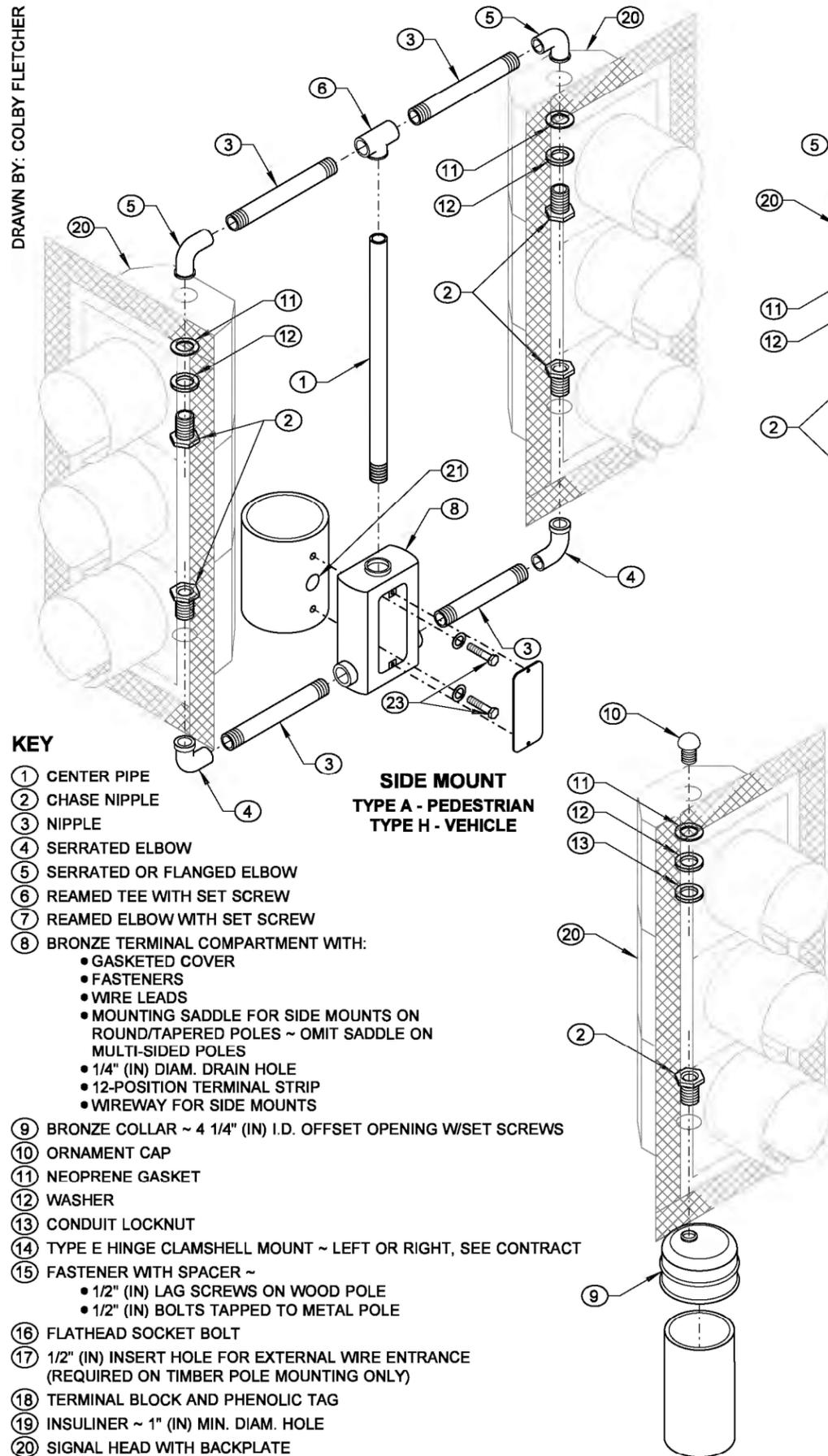
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Roark, Steve
Jul 31 2019 12:14 PM

STATE DESIGN ENGINEER

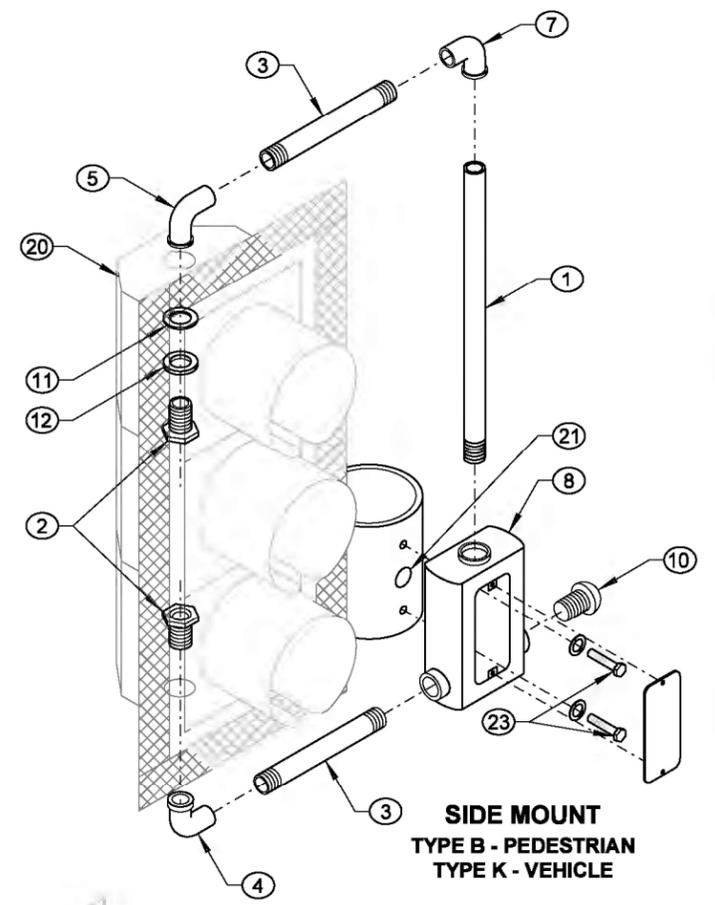
Washington State Department of Transportation



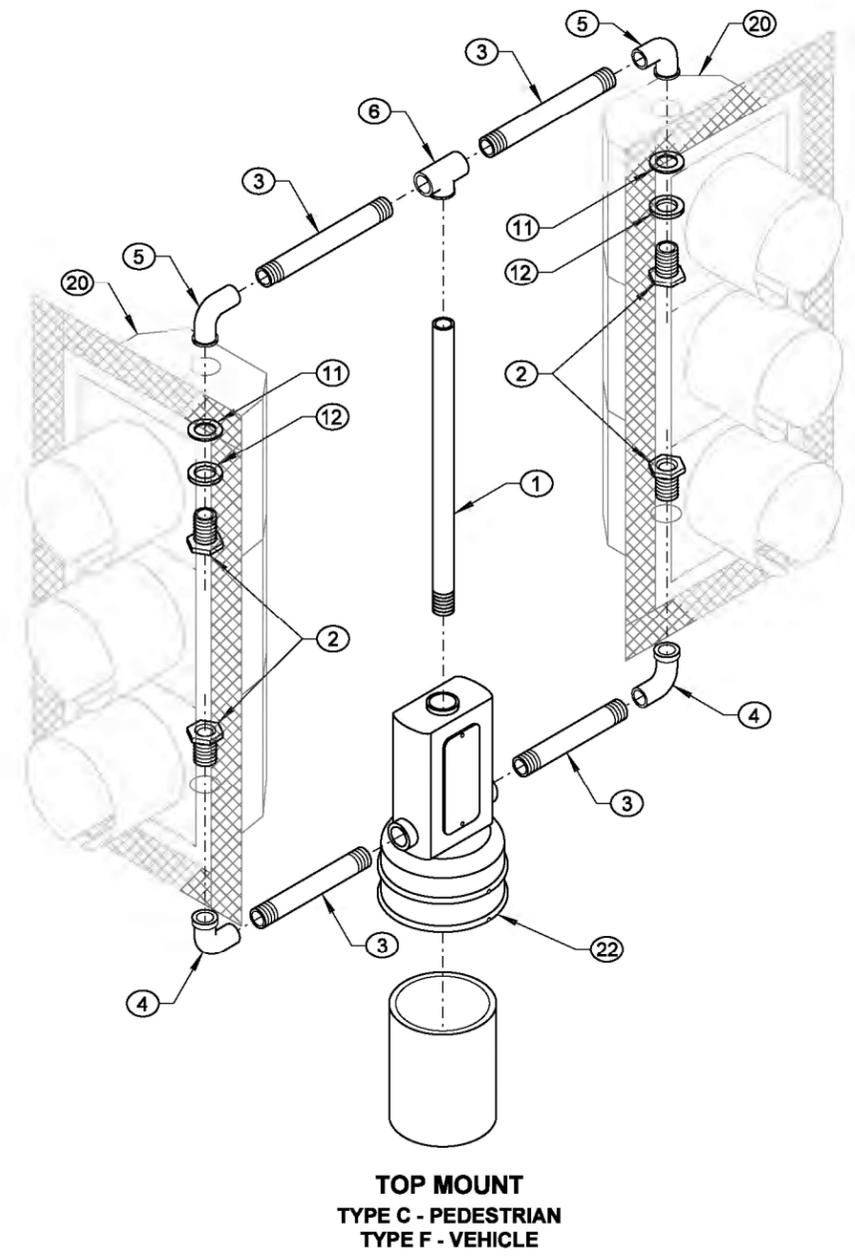
KEY

- ① CENTER PIPE
- ② CHASE NIPPLE
- ③ NIPPLE
- ④ SERRATED ELBOW
- ⑤ SERRATED OR FLANGED ELBOW
- ⑥ REAMED TEE WITH SET SCREW
- ⑦ REAMED ELBOW WITH SET SCREW
- ⑧ BRONZE TERMINAL COMPARTMENT WITH:
 - GASKETED COVER
 - FASTENERS
 - WIRE LEADS
 - MOUNTING SADDLE FOR SIDE MOUNTS ON ROUND/TAPERED POLES ~ OMIT SADDLE ON MULTI-SIDED POLES
 - 1/4" (IN) DIAM. DRAIN HOLE
 - 12-POSITION TERMINAL STRIP
 - WIREWAY FOR SIDE MOUNTS
- ⑨ BRONZE COLLAR ~ 4 1/4" (IN) I.D. OFFSET OPENING W/SET SCREWS
- ⑩ ORNAMENT CAP
- ⑪ NEOPRENE GASKET
- ⑫ WASHER
- ⑬ CONDUIT LOCKNUT
- ⑭ TYPE E HINGE CLAMSHELL MOUNT ~ LEFT OR RIGHT, SEE CONTRACT
- ⑮ FASTENER WITH SPACER ~
 - 1/2" (IN) LAG SCREWS ON WOOD POLE
 - 1/2" (IN) BOLTS TAPPED TO METAL POLE
- ⑯ FLATHEAD SOCKET BOLT
- ⑰ 1/2" (IN) INSERT HOLE FOR EXTERNAL WIRE ENTRANCE (REQUIRED ON TIMBER POLE MOUNTING ONLY)
- ⑱ TERMINAL BLOCK AND PHENOLIC TAG
- ⑲ INSULINER ~ 1" (IN) MIN. DIAM. HOLE
- ⑳ SIGNAL HEAD WITH BACKPLATE
- ㉑ FIELD DRILL POLE AND INSERT AN INSULINER OR SIMILAR DEVICE TO PROTECT CONDUCTORS
- ㉒ SIMILAR TO ⑧ WITH BRONZE INTEGRAL COLLAR
- ㉓ 1/2" (IN) DIAM. x 3" (IN) LONG BOLT WITH WASHER

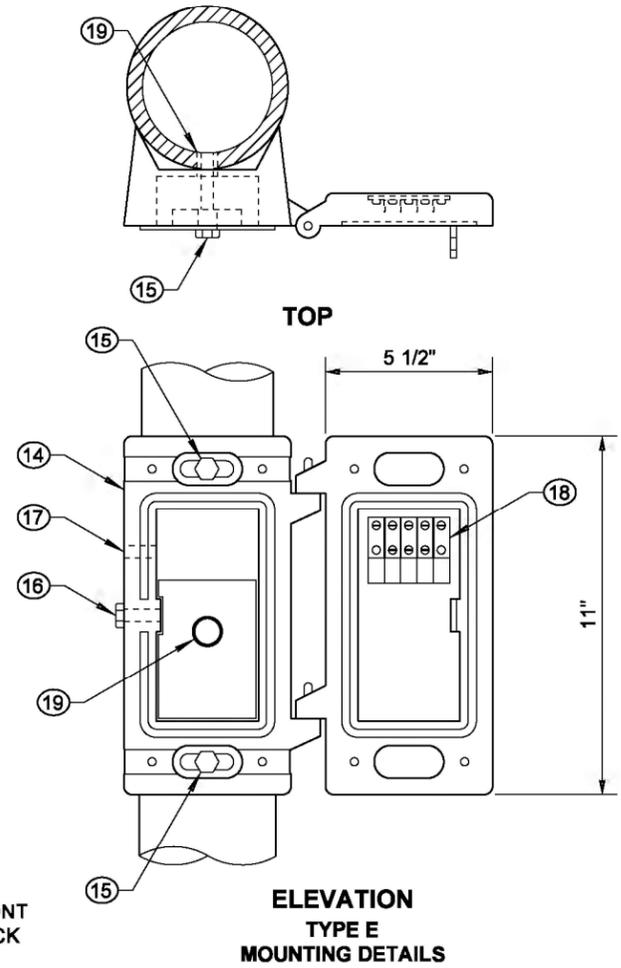
**SIDE MOUNT
TYPE A - PEDESTRIAN
TYPE H - VEHICLE**



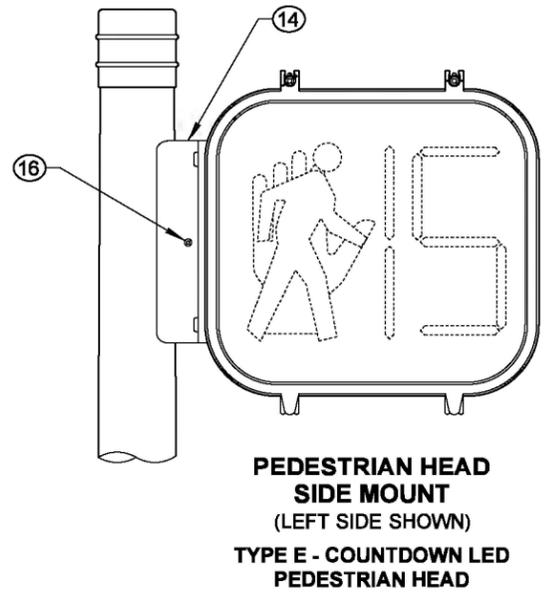
**SIDE MOUNT
TYPE B - PEDESTRIAN
TYPE K - VEHICLE**



**TOP MOUNT
TYPE C - PEDESTRIAN
TYPE F - VEHICLE**



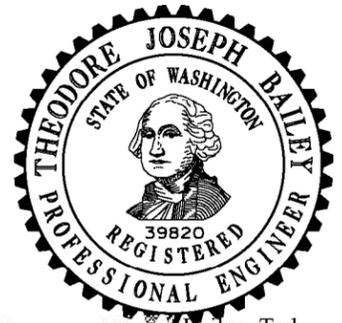
**ELEVATION
TYPE E
MOUNTING DETAILS**



**PEDESTRIAN HEAD
SIDE MOUNT
(LEFT SIDE SHOWN)
TYPE E - COUNTDOWN LED
PEDESTRIAN HEAD**

NOTES

1. See Contract for head type, mounting height, and orientation.
2. All nipples, fittings, and center pipes shall be 1 1/2" (in) diameter.
3. Install neoprene gasket inside head when flanged elbows are supplied.
4. Extend wire sheath a minimum of 1" (in) inside all signal and sign housings and terminal compartments.
5. Apply bead of silicone to the serrated ring and around the perimeter of all top openings prior to installation of fittings.
6. See **Standard Specification 9-29.16** for backplate requirements. Where required, prismatic sheeting shall be applied in accordance with the manufacturer's recommendations. The application surface of the backplate shall be cleaned, degreased with isopropyl alcohol, and dried prior to application of the sheeting.
7. Drill a 1/4" (in) drain hole in the bottom of each signal display assembly, and one in the bottom of each pedestrian head. When signal display assembly is mounted horizontally, drill a 1/4" (in) drain hole at the lowest point of each section of the signal assembly.

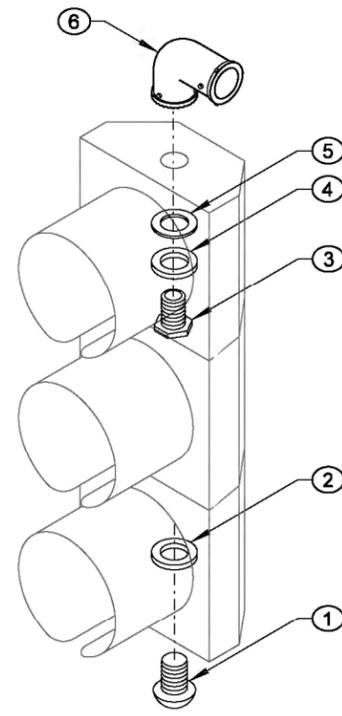


Theodore Joseph Bailey Bailey, Ted
Jul 8 2015 3:09 PM

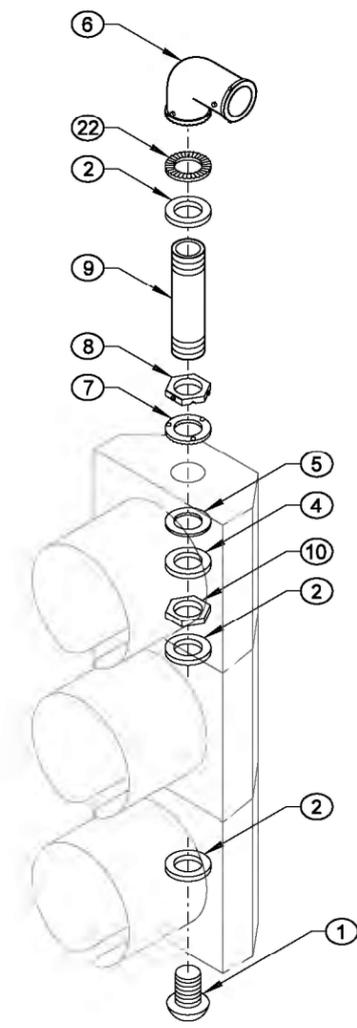
**SIGNAL HEAD MOUNTING
DETAILS ~ POLE AND POST
TOP MOUNTINGS
STANDARD PLAN J-75.10-02**

SHEET 1 OF 1 SHEET

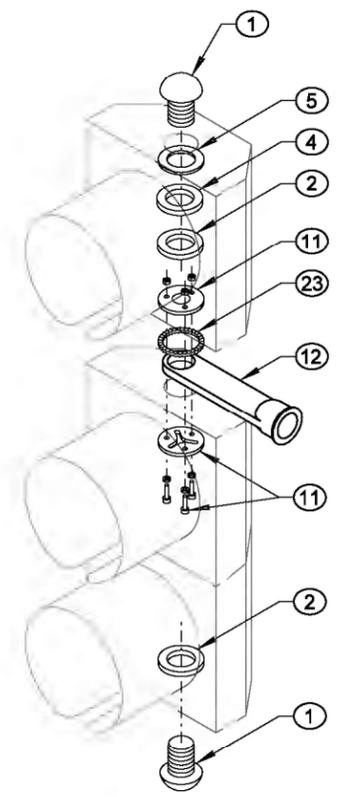
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Carpenter, Jeff
Jul 10 2015 7:19 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation



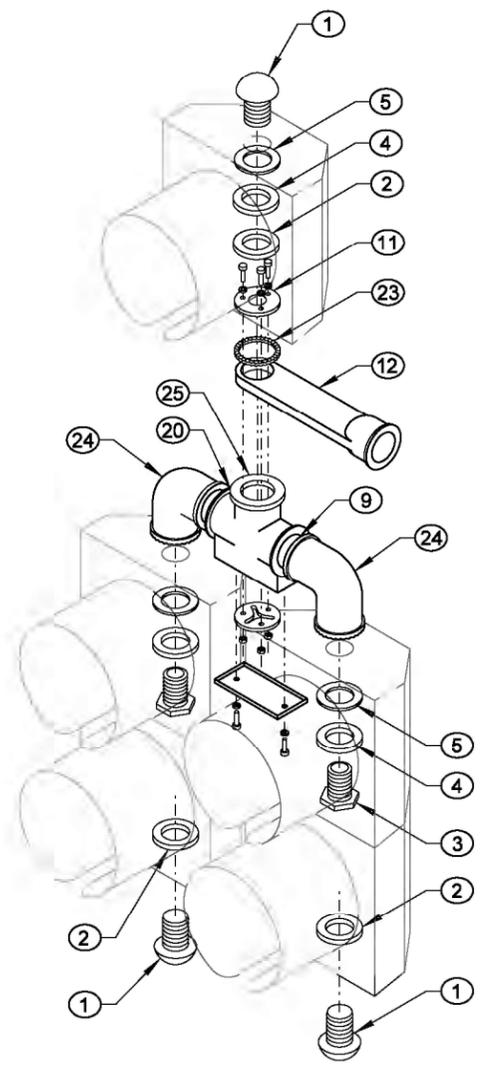
**ARM MOUNT
TYPE L**



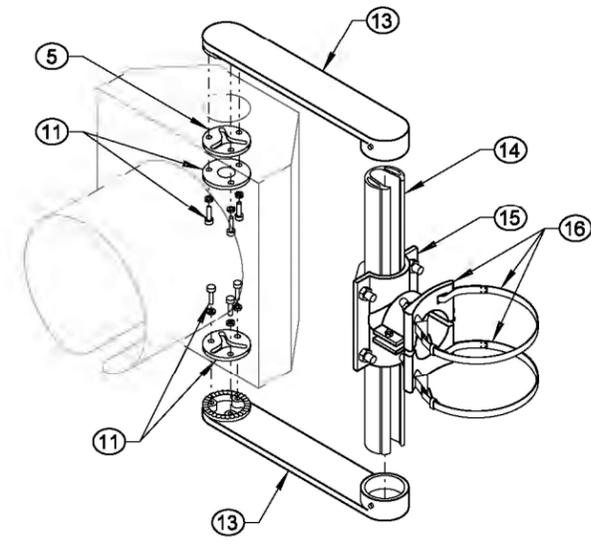
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TYPE LE**



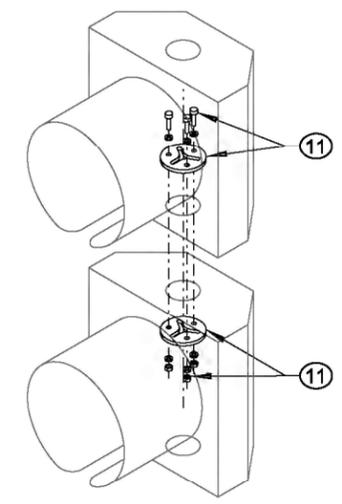
**ARM MOUNT
TYPE M**



**ARM MOUNT
TYPE M-5S
(TYPE M WITH
5-SECTION HEAD)**



**ARM MOUNT
TYPE N**



**HOUSING FIXTURE
CONNECTION DETAIL**

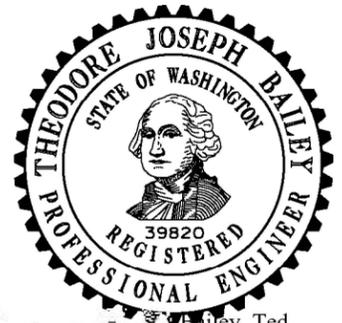
KEY

- ① END CAP
- ② 1 1/2" (IN) DIAM. CONDUIT LOCKNUT
- ③ 1 1/2" (IN) DIAM. CHASE NIPPLE
- ④ STEEL WASHER
- ⑤ NEOPRENE GASKET
- ⑥ BRONZE SERRATED ELL FITTING WITH:
 - 3/8" (IN) STAINLESS STEEL THROUGH BOLT AND NUTS
 - THREE STAINLESS STEEL SET SCREWS AT SLIPFITTER CONNECTION
 - THREE ALLEN HEAD STAINLESS STEEL SET SCREWS AT CONDUIT NIPPLE CONNECTION
- ⑦ SERRATED RING WITH PINS
- ⑧ HEX LOCKNUT WITH:
 - TWO ALLEN HEAD STAINLESS STEEL SET SCREWS
 - PIN RECEPTACLES
- ⑨ 1 1/2" (IN) DIAM. CONDUIT NIPPLE
- ⑩ 1 1/2" (IN) DIAM. HEX LOCKNUT
- ⑪ MOUNTING ASSEMBLY
- ⑫ BRONZE ELEVATOR PLUMBIZER WITH 3/8" (IN) STAINLESS STEEL THROUGH BOLT, WASHERS, AND TWO NUTS
- ⑬ ALUMINUM ARM WITH SET SCREW
- ⑭ SLOTTED TUBE WITH CLOSURE STRIP
- ⑮ 2 1/2" (IN) I.D. MIN. TUBE CLAMP
- ⑯ INTERNALLY THREADED CLAMP ASSEMBLY WITH:
 - TWO SET SCREWS
 - 1/2" (IN) × 0.045" (IN) STAINLESS STEEL BANDS
 - 7/16" (IN) SCREW BUCKLES WITH SWIVELS, NUTS, AND WASHERS
 - BAND CLIPS WITH ALLEN HEAD STAINLESS STEEL SET SCREWS
- ⑰ BRONZE MESSENGER HANGER WITH:
 - 1/2" (IN) DIAM. J-BOLTS
 - CABLE LOCK BAR
 - RIVET
 - COTTER KEY
- ⑱ BRONZE INTERNALLY THREADED WIRE ENTRANCE WITH:
 - BUSHING INSERT OR RUBBER GROMMET
 - ALLEN HEAD STAINLESS STEEL SET SCREW
- ⑲ BRONZE BALANCE ADJUSTER (WHERE REQUIRED)
- ⑳ MULTI-HEAD MOUNTING ASSEMBLY
- ㉑ LOWER ARM ASSEMBLY
- ㉒ SERRATED RING WITH NO PINS
- ㉓ SERRATED WASHER
- ㉔ 1 1/2" (IN) DIAM. SERRATED OR FLANGED ELBOW
- ㉕ CENTER SUPPORT WITH 1 1/2" (IN) DIAM. HUBS WITH COVER AND GASKET
- ㉖ 1 1/2" (IN) DIAM. SERRATED COUPLING
- ㉗ 1 1/2" (IN) BREAKAWAY TETHER ASSEMBLY WITH OPTIONAL EXTENDER BAR
- ㉘ SERRATED CROSS

NOTES

1. Type M mounting shall have "O" ring groove and seal on top and bottom of signal attachment.
2. Type M mounting for conventional heads shall have a 2" (in) diameter opening at the signal attachment.
3. Type M mounting for optically programmed heads shall have a 3 1/2" (in) diameter opening at the signal attachment.
4. Type N mounting with optically programmed heads shall be installed with 14" (in) nominal arms.
5. See **Standard Plan J-75.30** for tether wire and backplate requirements.
6. Apply bead of silicone around the perimeter of all top end cap openings prior to installation of the end cap assembly.
7. See **Standard Specification 9-29.16** for backplate requirements. Where required, prismatic sheeting shall be applied in accordance with the manufacturer's recommendations. The application surface of the backplate shall be cleaned, degreased with isopropyl alcohol, and dried prior to application of the sheeting.
8. Drill a 1/4" (in) drain hole in the bottom of each signal assembly. When signal display assembly is mounted horizontally, drill a 1/4" (in) drain hole at the lowest point of each section of the signal assembly.

NOTE: BACKPLATES NOT SHOWN FOR CLARITY

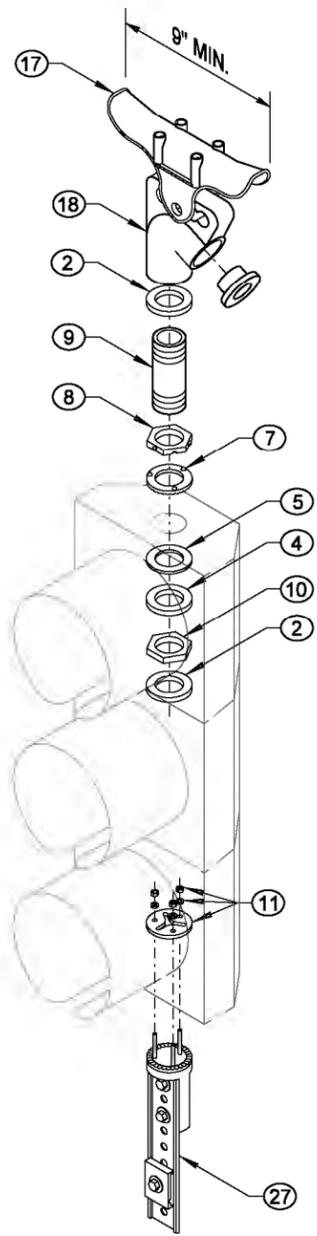


Theodore Joseph Bailey, Ted Bailey, Ted
Jul 8 2015 3:10 PM

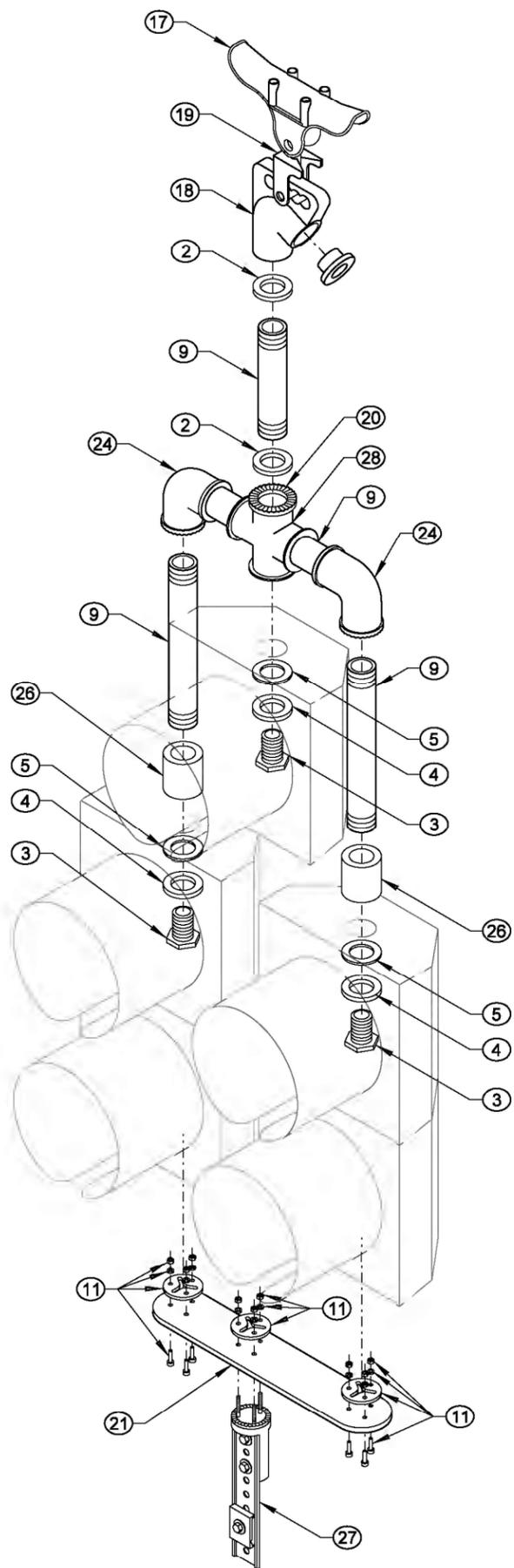
**SIGNAL HEAD MOUNTING
DETAILS ~ MAST ARM AND
SPAN WIRE MOUNTINGS
STANDARD PLAN J-75.20-01**

SHEET 1 OF 2 SHEETS

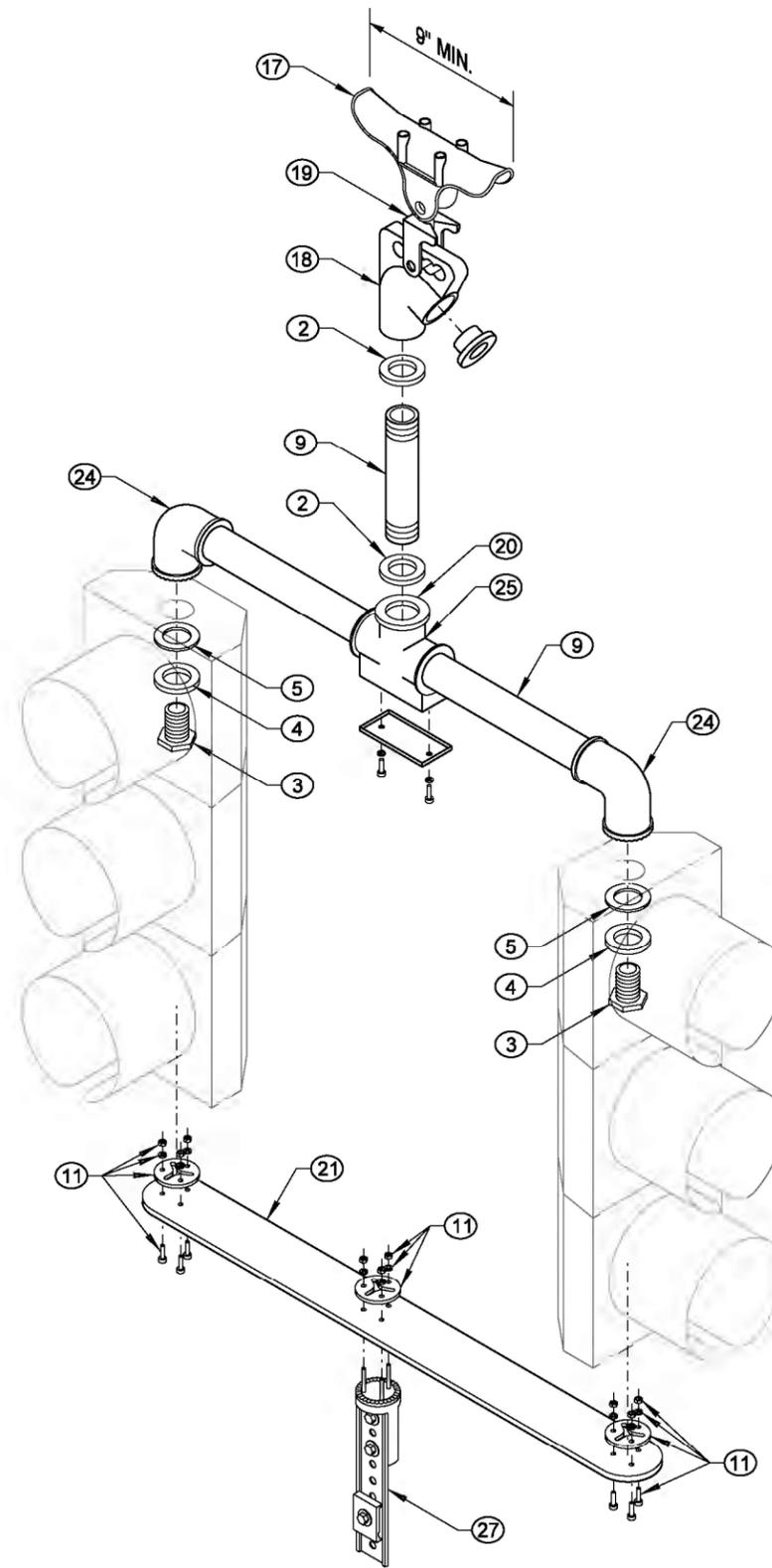
APPROVED FOR PUBLICATION
Carpenter, Jeff
Jul 10 2015 7:18 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation



**SPAN WIRE
TYPE P (1 HEAD)**



**SPAN WIRE
TYPE P-5S
(TYPE P WITH 5-SECTION HEAD)**



**SPAN WIRE
TYPE Q (2 HEADS)
TYPE R (3 HEADS)
TYPE S (4 HEADS)**

**NOTE: BACKPLATES NOT SHOWN
FOR CLARITY**



Theodore Joseph Bailey Bailey, Ted
Jul 8 2015 3:10 PM

**SIGNAL HEAD MOUNTING
DETAILS ~ MAST ARM AND
SPAN WIRE MOUNTINGS
STANDARD PLAN J-75.20-01**

SHEET 2 OF 2 SHEETS

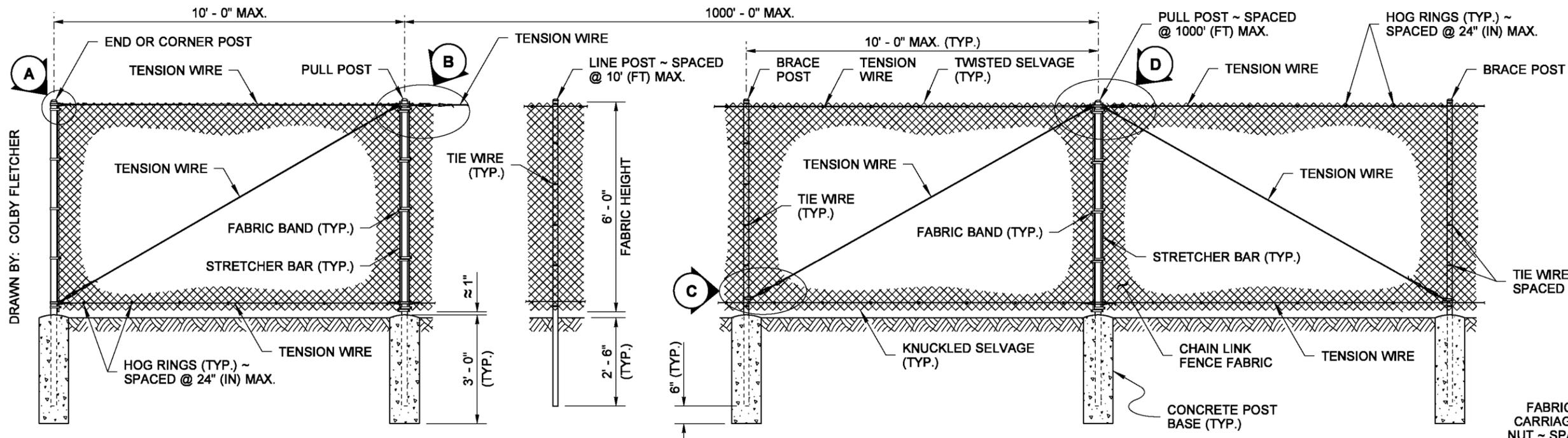
APPROVED FOR PUBLICATION
Carpenter, Jeff

Jul 10 2015 7:18 AM

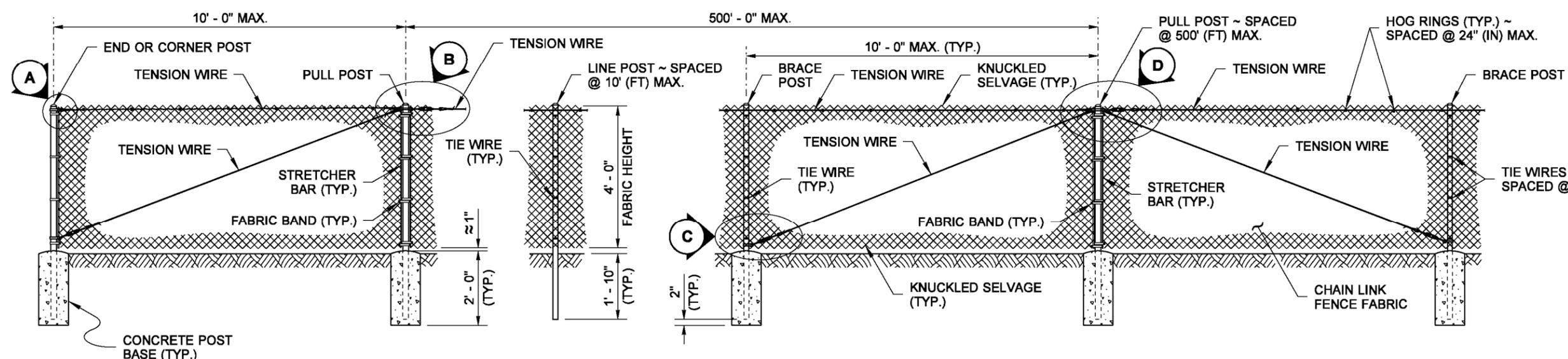
STATE DESIGN ENGINEER



Washington State Department of Transportation

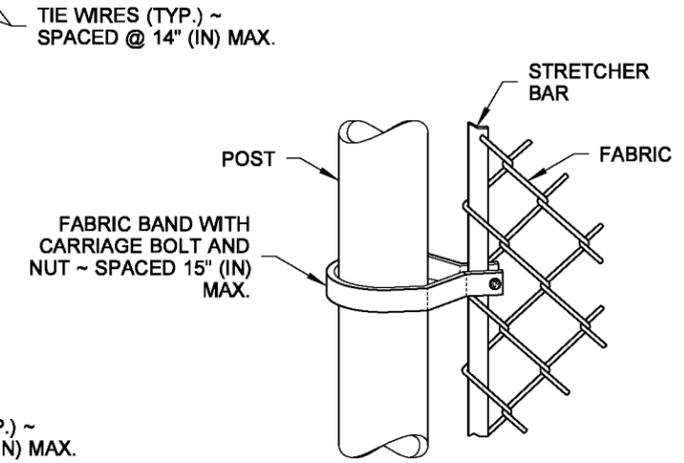


TYPE 3



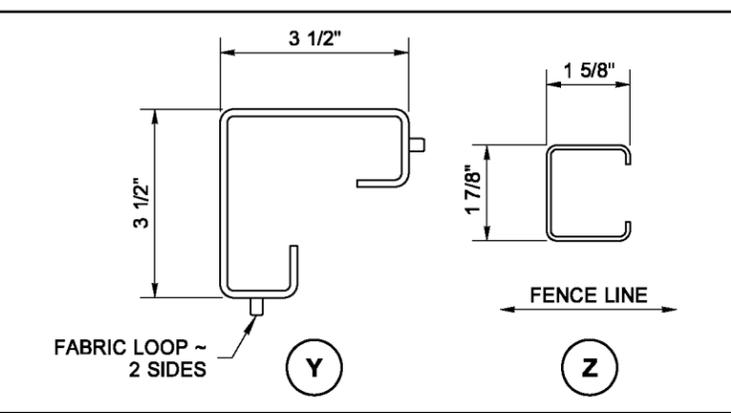
TYPE 4

- NOTES**
1. All concrete post bases shall be 10" (in) minimum diameter.
 2. Along the top and bottom, using Hog Rings, fasten the Chain Link Fence Fabric to the Tension Wire within the limits of the first full fabric weave.
 3. Details are illustrative and shall not limit hardware design or post selection of any particular fence type.
 4. Fencing shall be used for security and boundary delineation only.



METHOD OF FASTENING STRETCHER BAR TO POST

POST AND RAIL SPECIFICATIONS			
POST	PIPE	ROLL FORMED	
	NOM. SIZE (SCH. 40) I.D.	SECTION	WEIGHT (lb/ft)
END, CORNER, OR PULL POST	2 1/2" DIAM.	Y	5.10
LINE OR BRACE POST	2" DIAM.	Z	1.85



Barry, Ed
Jul 14 2015 11:14 AM

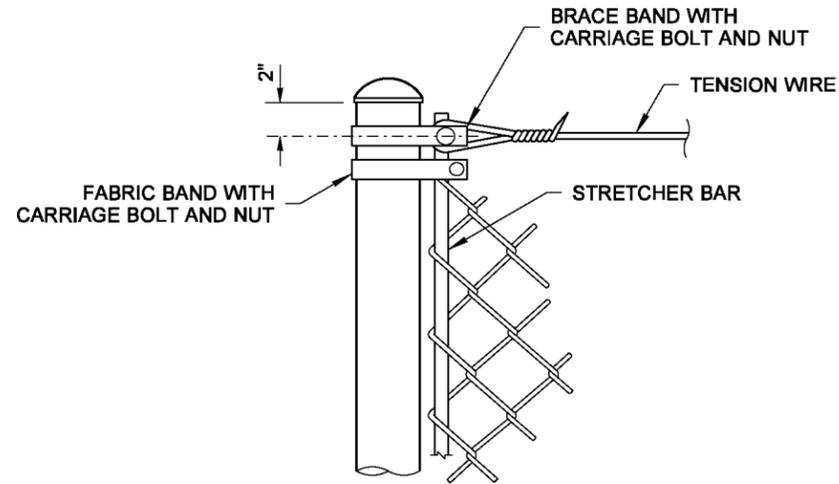
CHAIN LINK FENCE TYPES 3 AND 4

STANDARD PLAN L-20.10-03

SHEET 1 OF 2 SHEETS

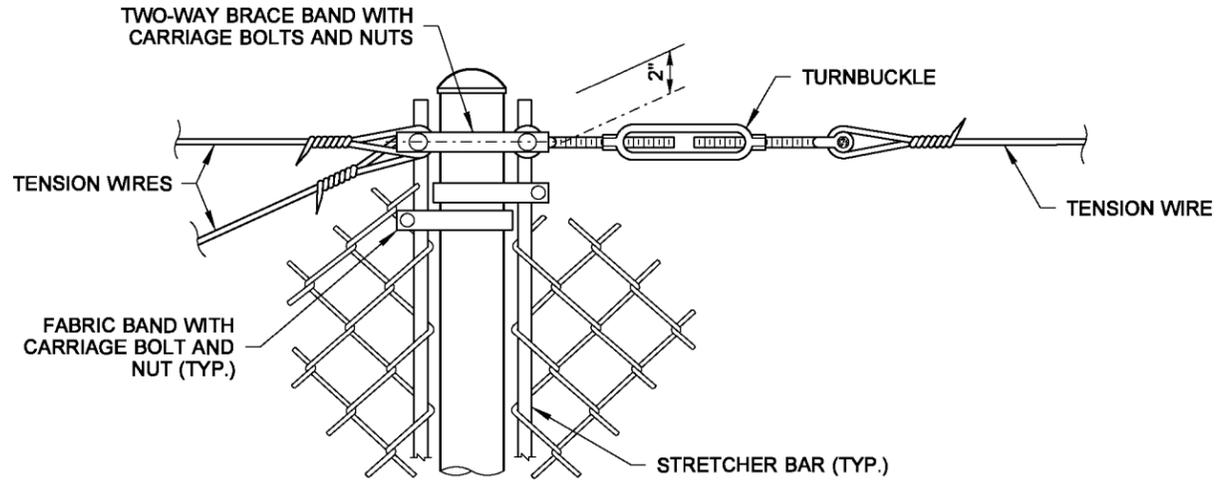
APPROVED FOR PUBLICATION
Carpenter, Jeff
Jul 14 2015 11:24 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: COLBY FLETCHER



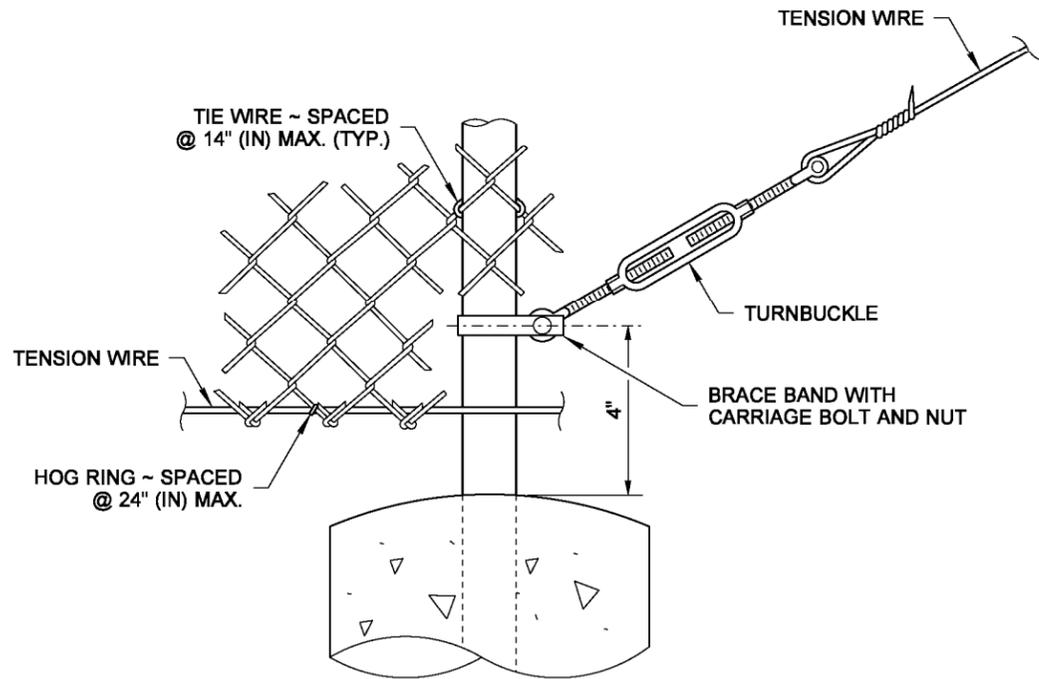
END OR CORNER POST

DETAIL A



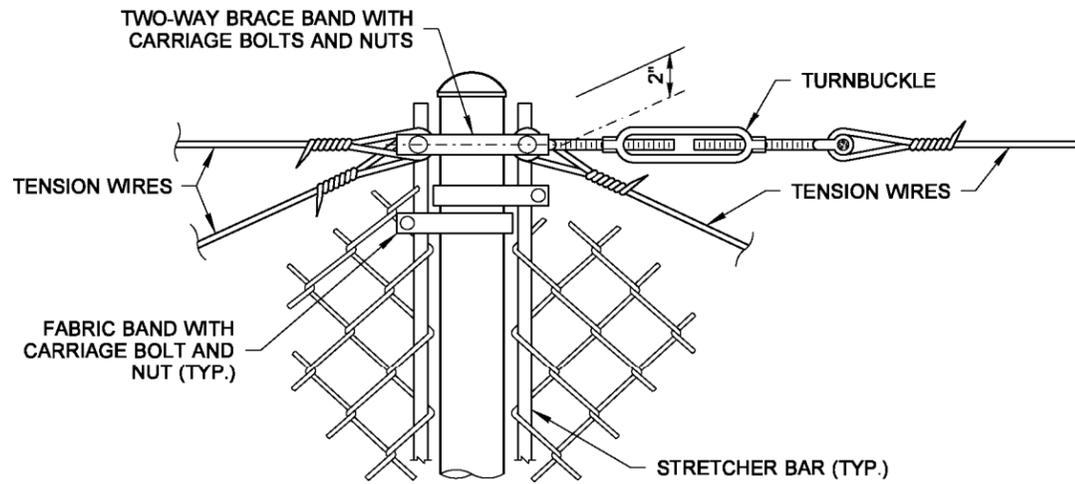
PULL POST (AT END OR CORNER)

DETAIL B



BRACE POST

DETAIL C



PULL POST (WITHIN RUN)

DETAIL D



Carl R... Barry, Ed
Jul 14 2015 11:14 AM

**CHAIN LINK FENCE
TYPES 3 AND 4**

STANDARD PLAN L-20.10-03

SHEET 2 OF 2 SHEETS

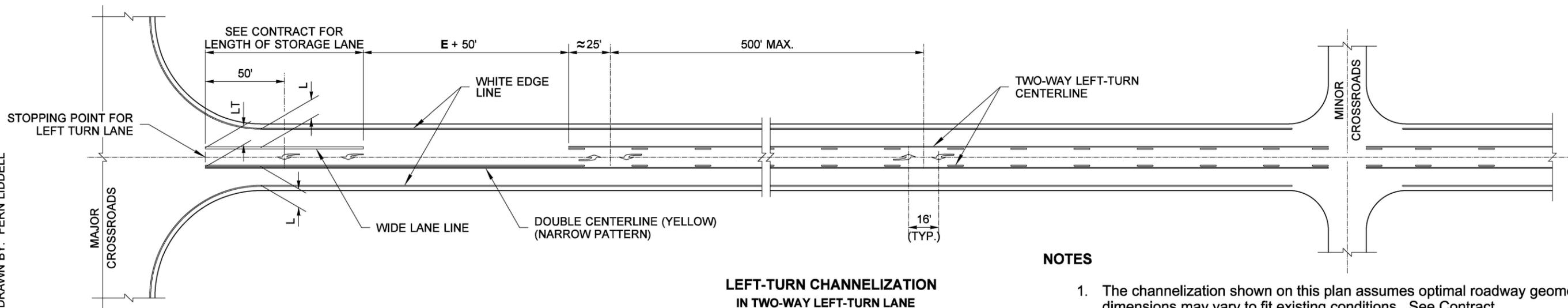
APPROVED FOR PUBLICATION
Carpenter, Jeff

Jul 14 2015 11:25 AM

STATE DESIGN ENGINEER

Washington State Department of Transportation

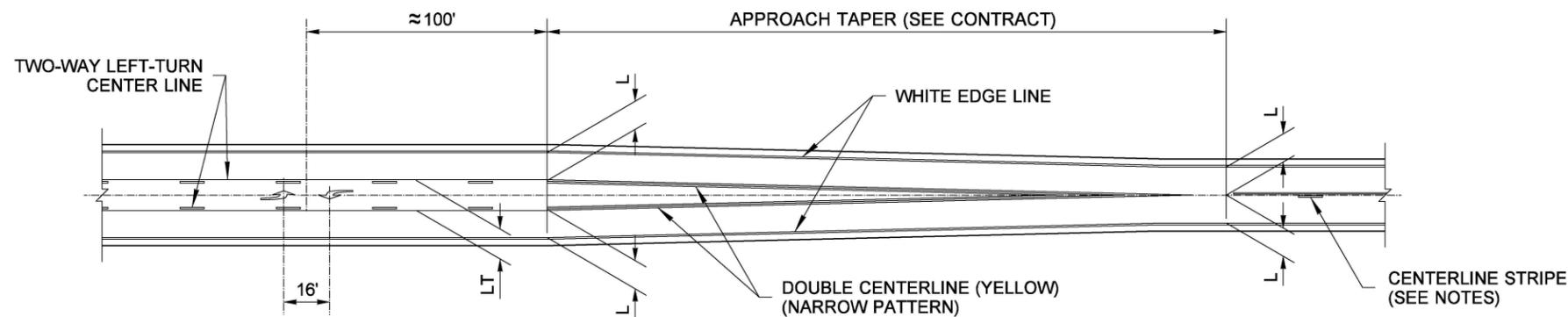
DRAWN BY: FERN LIDDELL



**LEFT-TURN CHANNELIZATION
IN TWO-WAY LEFT-TURN LANE**

NOTES

1. The channelization shown on this plan assumes optimal roadway geometric design. The dimensions may vary to fit existing conditions. See Contract.
2. The channelization shown on this plan is for a two-lane highway. The channelization plan may be used on four-lane undivided highways with the appropriate considerations.
3. Centerline striping on the approach to raised channelization shall be No Pass in accordance with MUTCD figure 3B-15. Centerline striping on the departure from raised channelization shall be determined by an engineering study.
4. Centerline striping on the approach to and departure from painted channelization shall be determined by an engineering study.
5. Centerline striping on four-lane undivided highways shall be a double centerline.
6. The two Type 2L (SL) Traffic Arrows shown in the left-turn storage lane are optional, but recommended. Arrows may be added for longer storage lanes or deleted for shorter storage lanes. See Contract Plans.

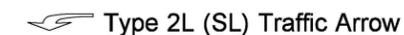


**TWO-WAY LEFT-TURN LANE
TRANSITION**

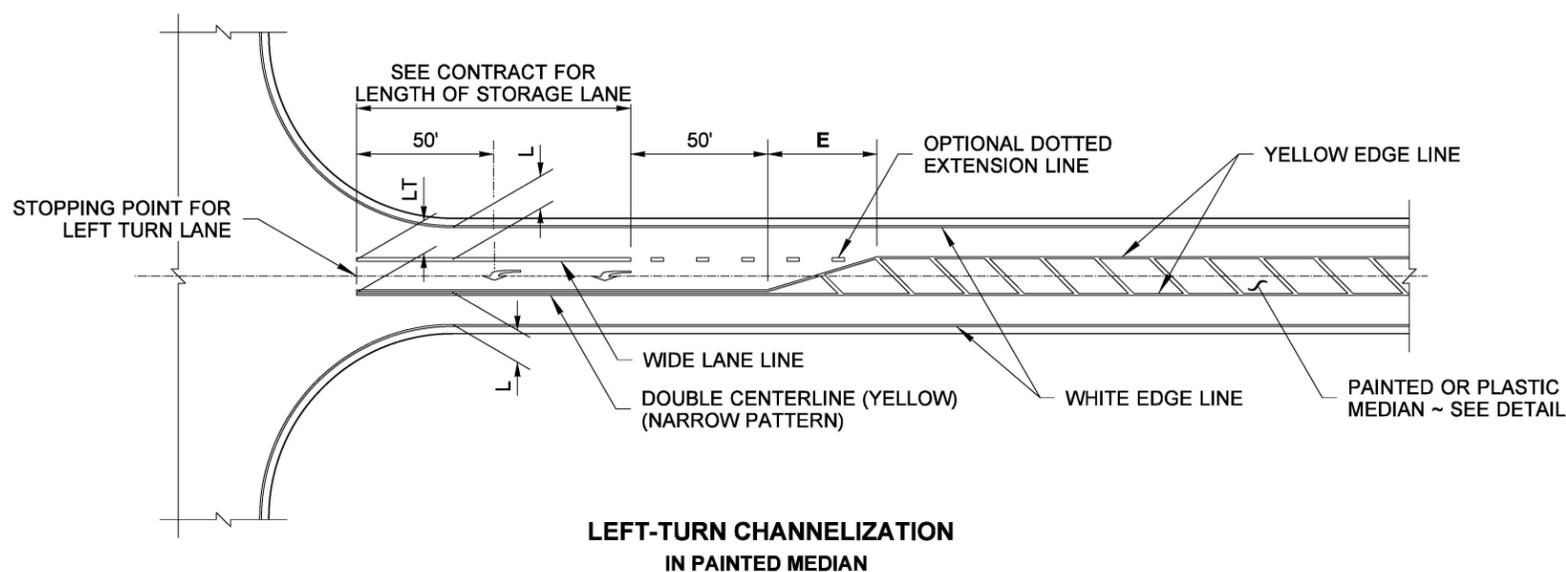
POSTED SPEED	DIMENSION E ¹
60 MPH	180'
55 MPH	180'
50 MPH	180'
45 MPH	180'
40 MPH	120'
35 MPH	120'
30 MPH	120'
25 MPH	120'
20 MPH	120'

LEGEND

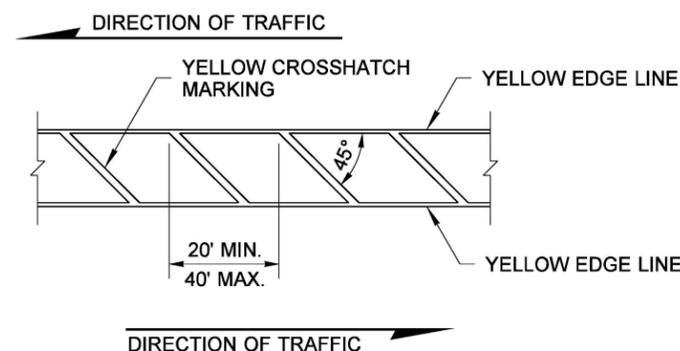
L = Lane Width. See Contract for specified lane widths.
 L T = Left -Turn Lane width. See Contract



¹ Can be reduced to a minimum of 50' to increase storage capacity.



**LEFT-TURN CHANNELIZATION
IN PAINTED MEDIAN**



**PAINTED OR PLASTIC MEDIAN
COMPOSED OF LONGITUDINAL MARKINGS**



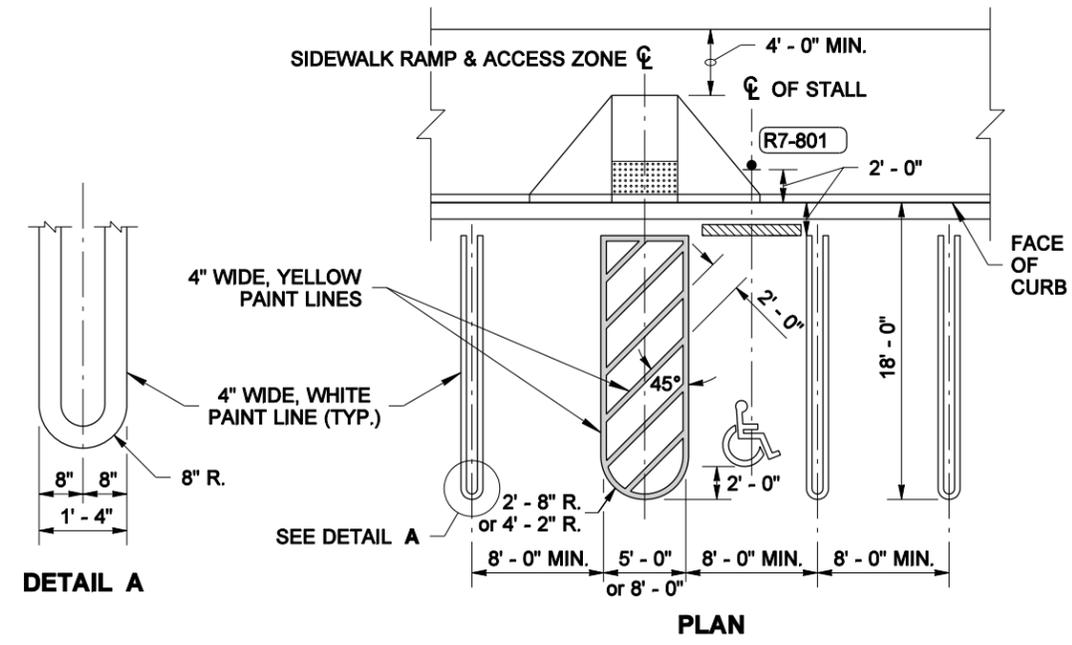
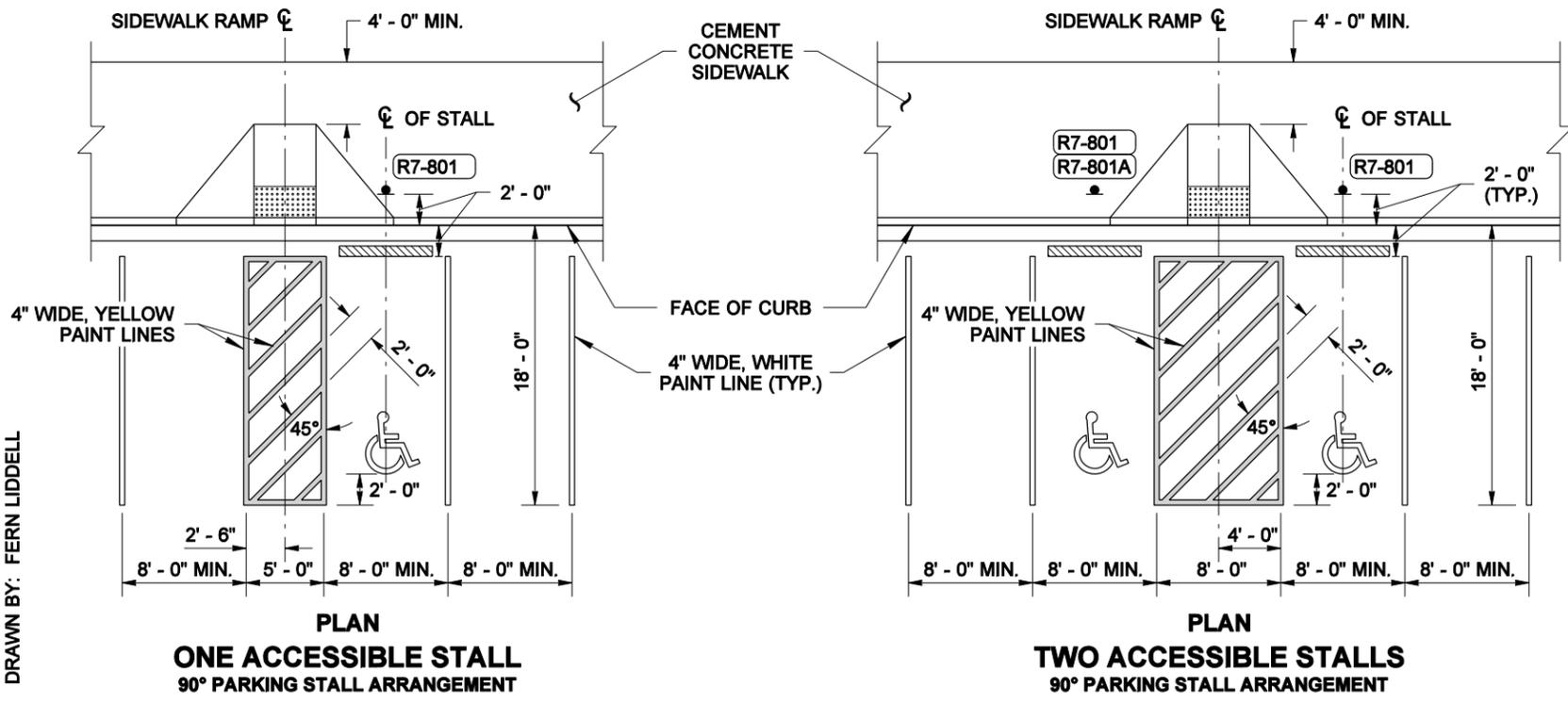
Walsh, Brian
 Sep 23 2020 2:03 PM

**TWO-WAY LEFT-TURN
AND MEDIAN
CHANNELIZATION
STANDARD PLAN M-3.40-04**

SHEET 1 OF 1 SHEET

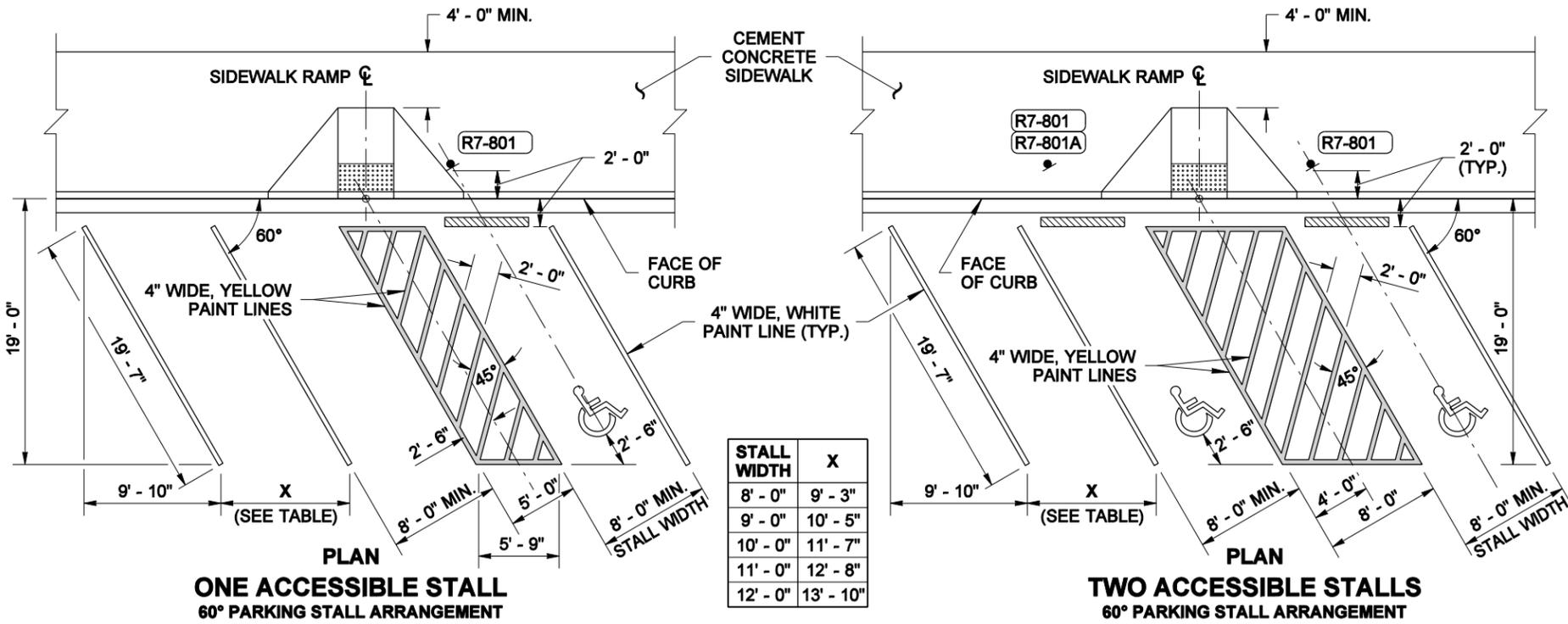
APPROVED FOR PUBLICATION
 Date: 2020.09.25
 14:55:19 -07'00'
 STATE DESIGN ENGINEER
 Washington State Department of Transportation

DRAWN BY: FERN LIDDELL



NOTES

1. Three, four and five accessible stall arrangements may be either 60° (angled) or 90° (perpendicular) parking arrangements. See Contract.
2. An Access Parking Space Symbol is required for each accessible parking stall. A blue background and white border are required when the symbol is installed on a cement concrete surface.
3. All accessible stalls shall have wheel stops. Place wheel stops in other stalls when specified in the contract. Wheel stops shall be approximately 6" high and a minimum of 6' long.
4. Refer to the Standard Plans for sidewalk ramp, detectable warning pattern, and curb details.

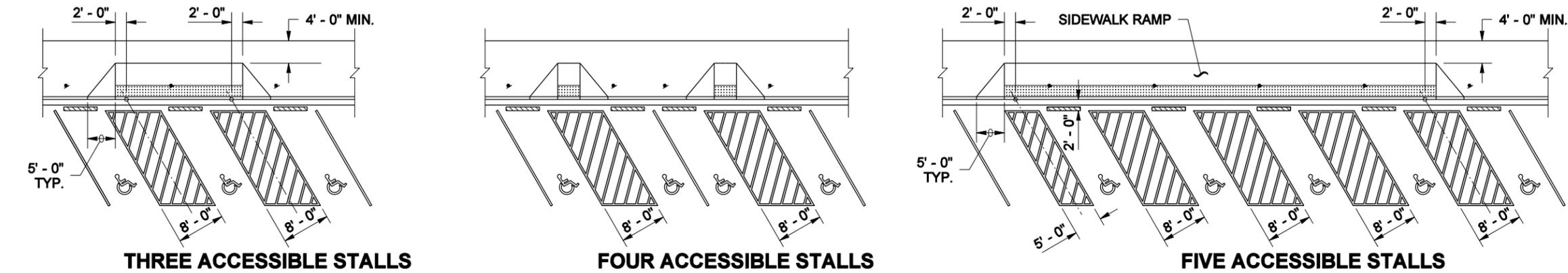


LEGEND

- R7-801 Reserved Parking Sign and post with R7-801A Plaque, if indicated (See Sign Fabrication Manual)
- Access Parking Space Symbol
- Manufactured wheel stop
- Detectable Warning Pattern



NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT UNLESS IT IS APPROVED AND SEALED BY THE ENGINEER AND APPROVED BY THE BOARD OF ENGINEERS AND SURVEYORS OF THE STATE OF WASHINGTON. THIS PLAN IS FILED AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.



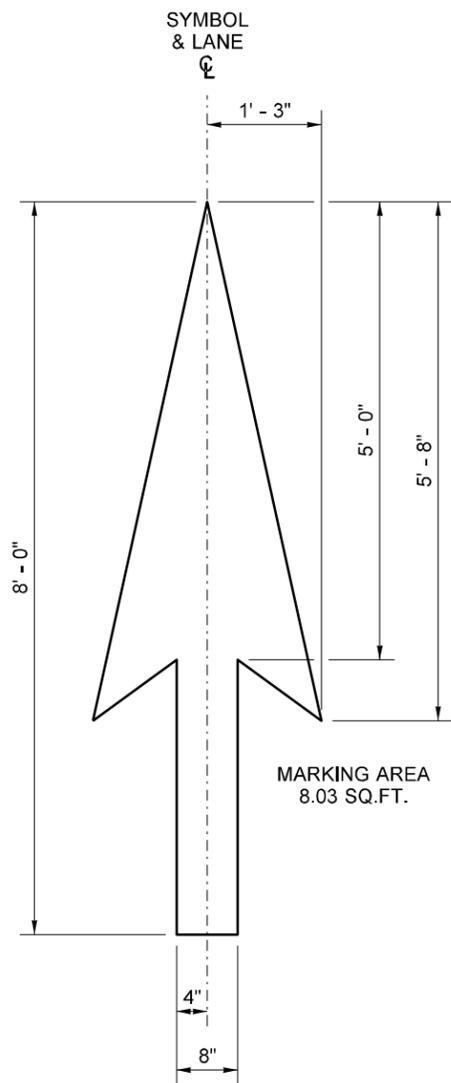
PARKING SPACE LAYOUTS
STANDARD PLAN M-17.10-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

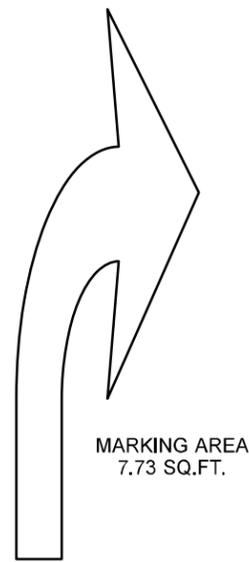
Pasco Bakotich III 07-03-08
STATE DESIGN ENGINEER DATE

Washington State Department of Transportation



**TYPE 1S
TRAFFIC ARROW**

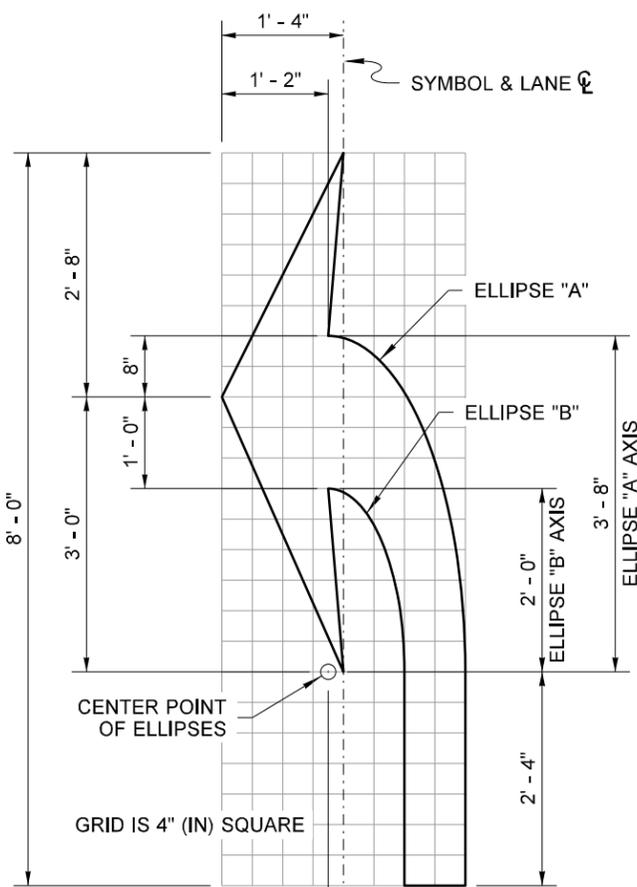
MARKING AREA
8.03 SQ.FT.



MARKING AREA
7.73 SQ.FT.

**TYPE 2SR (RIGHT)
TRAFFIC ARROW**

MIRROR IMAGE OF
TYPE 2SL TRAFFIC ARROW
(SHOWN AT REDUCED SCALE)



MARKING AREA
7.73 SQ.FT.

TYPE 2SL (LEFT) TRAFFIC ARROW

10" ~ ELLIPSE "B" AXIS

1'-2" ELLIPSE "A" AXIS

1'-6" ELLIPSE "A" AXIS

8" ELLIPSE "A" AXIS

GRID IS 4" (IN) SQUARE

CENTER POINT OF ELLIPSES

3'-0" ELLIPSE "B" AXIS

3'-8" ELLIPSE "A" AXIS

2'-0" ELLIPSE "B" AXIS

ELLIPSE "A"

ELLIPSE "B"

1'-4" SYMBOL & LANE CL

1'-2" SYMBOL & LANE CL

8'-0" MARKING AREA

3'-0" MARKING AREA

2'-8" MARKING AREA

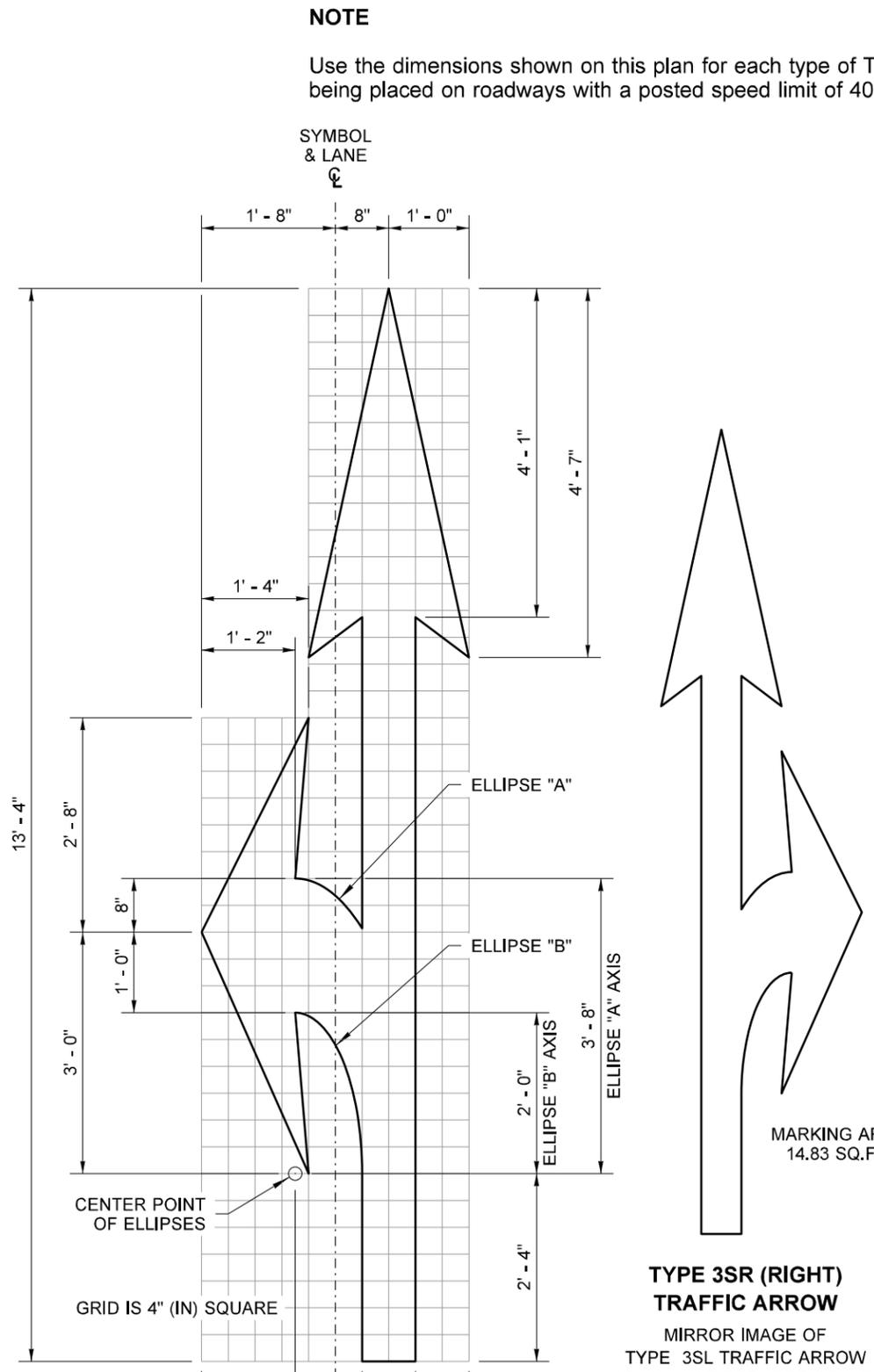
8" MARKING AREA

1'-0" MARKING AREA

8" MARKING AREA

1'-2" MARKING AREA

1'-4" MARKING AREA



MARKING AREA
14.83 SQ.FT.

TYPE 3SL (LEFT) TRAFFIC ARROW

10" ~ ELLIPSE "B" AXIS

1'-2" ELLIPSE "A" AXIS

1'-6" ELLIPSE "A" AXIS

8" ELLIPSE "A" AXIS

GRID IS 4" (IN) SQUARE

CENTER POINT OF ELLIPSES

3'-0" ELLIPSE "B" AXIS

2'-8" ELLIPSE "A" AXIS

13'-4" MARKING AREA

1'-8" SYMBOL & LANE CL

8" SYMBOL & LANE CL

1'-0" SYMBOL & LANE CL

1'-4" MARKING AREA

1'-2" MARKING AREA

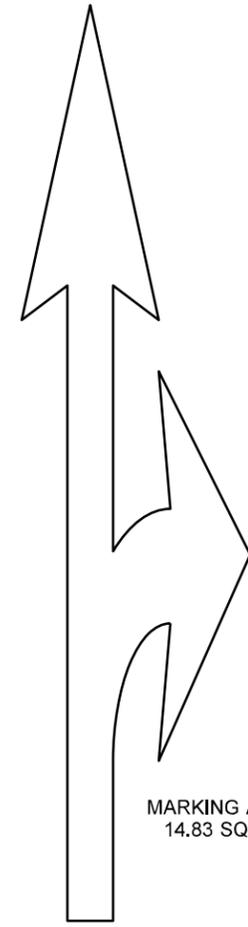
4'-1" MARKING AREA

4'-7" MARKING AREA

SYMBOL & LANE CL

NOTE

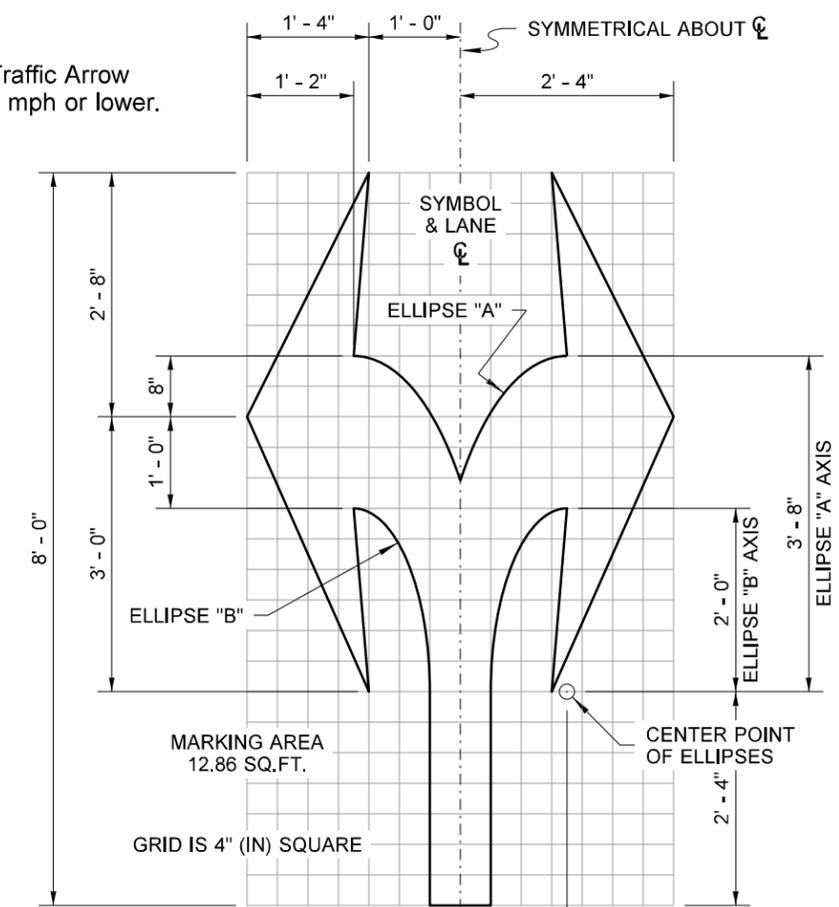
Use the dimensions shown on this plan for each type of Traffic Arrow being placed on roadways with a posted speed limit of 40 mph or lower.



MARKING AREA
14.83 SQ.FT.

**TYPE 3SR (RIGHT)
TRAFFIC ARROW**

MIRROR IMAGE OF
TYPE 3SL TRAFFIC ARROW
(SHOWN AT REDUCED SCALE)



MARKING AREA
12.86 SQ.FT.

**TYPE 4S
TRAFFIC ARROW**

10" ~ ELLIPSE "B" AXIS

1'-6" ELLIPSE "A" AXIS

8" ELLIPSE "A" AXIS

GRID IS 4" (IN) SQUARE

CENTER POINT OF ELLIPSES

3'-0" ELLIPSE "B" AXIS

2'-8" ELLIPSE "A" AXIS

8'-0" MARKING AREA

1'-0" SYMBOL & LANE CL

1'-2" SYMBOL & LANE CL

1'-4" SYMBOL & LANE CL

ELLIPSE "A"

ELLIPSE "B"

2'-0" ELLIPSE "B" AXIS

3'-8" ELLIPSE "A" AXIS

2'-4" SYMMETRICAL ABOUT CL



Walsh, Brian
Apr 16 2015 2:21 PM

**SYMBOL MARKINGS ~
TRAFFIC ARROWS FOR
LOW-SPEED ROADWAYS
STANDARD PLAN M-24.40-02**

SHEET 1 OF 2 SHEETS

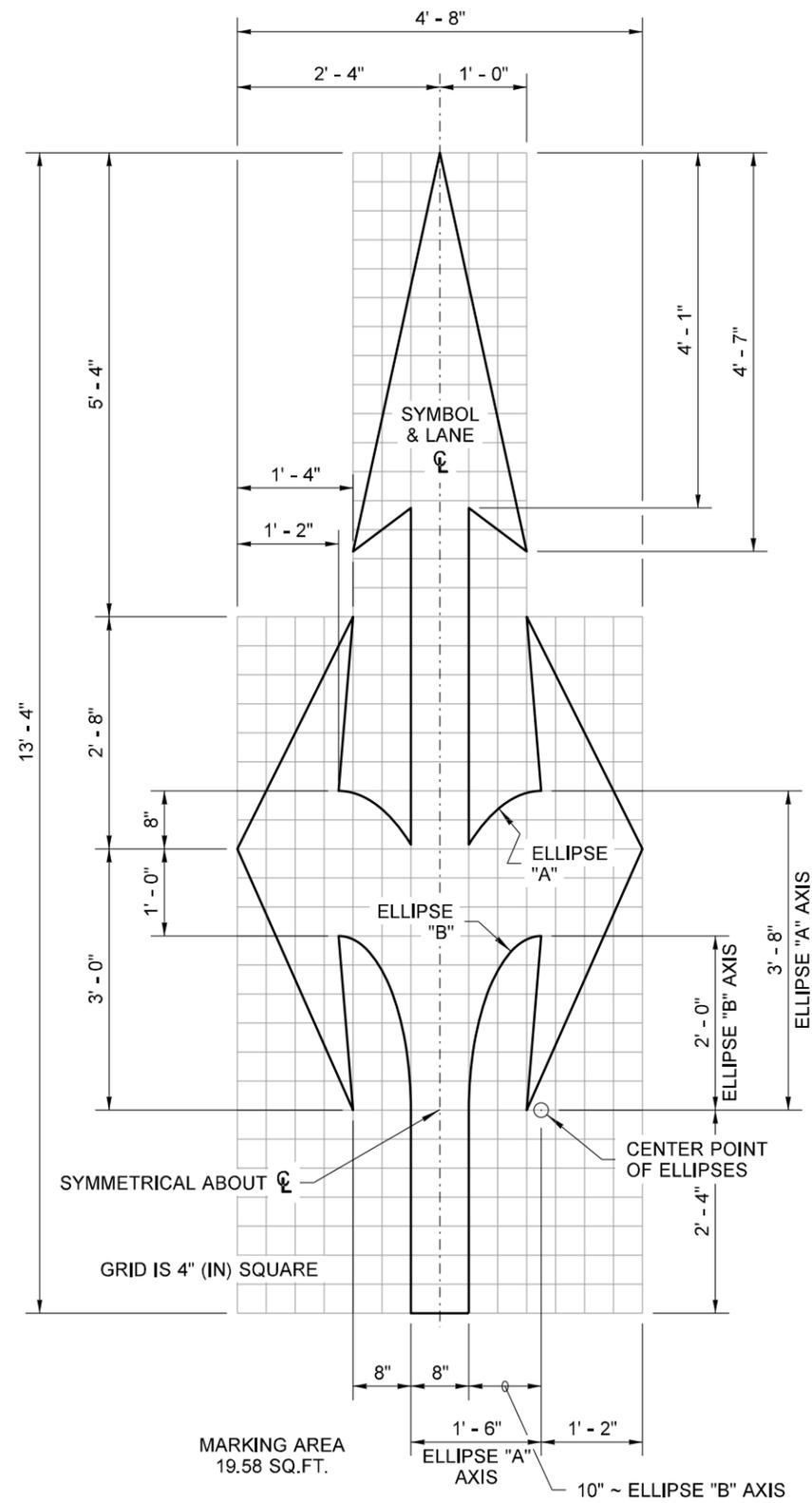
APPROVED FOR PUBLICATION

Bakotich, Pasco
Apr 20 2015 10:11 AM

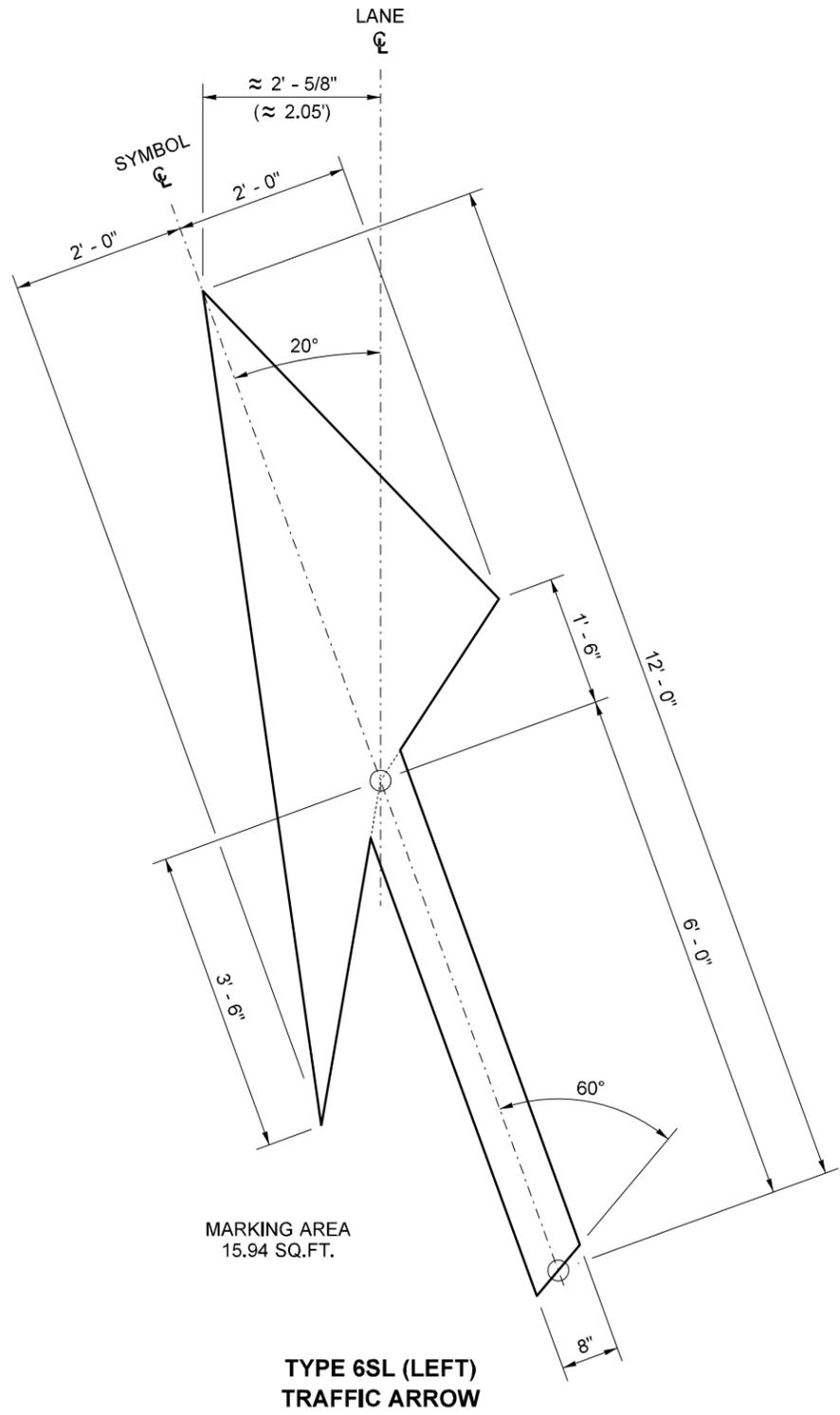
STATE DESIGN ENGINEER

Washington State Department of Transportation

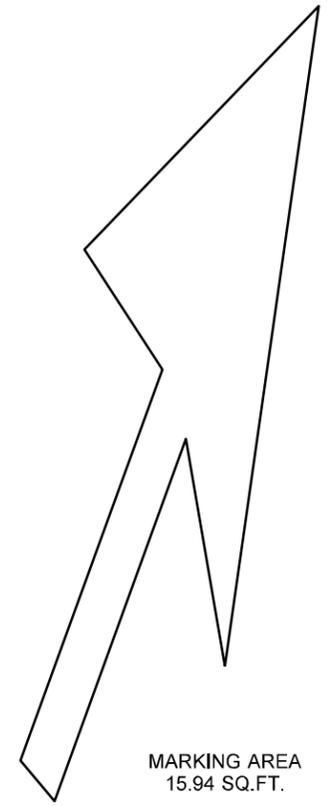
DRAWN BY: COLBY FLETCHER



TYPE 7S TRAFFIC ARROW



TYPE 6SL (LEFT) TRAFFIC ARROW



TYPE 6SR (RIGHT) TRAFFIC ARROW

MIRROR IMAGE OF TYPE 6SL
(MIRRORED ABOUT LANE CENTERLINE)
(SHOWN AT REDUCED SCALE)

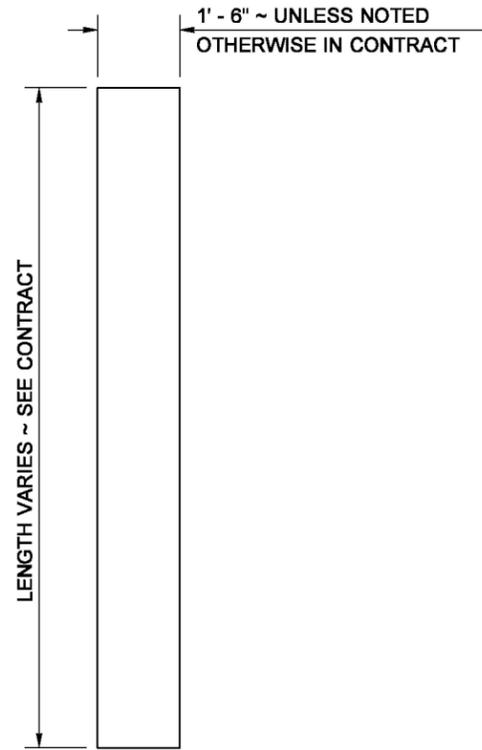


Walsh, Brian
Apr 16 2015 2:21 PM

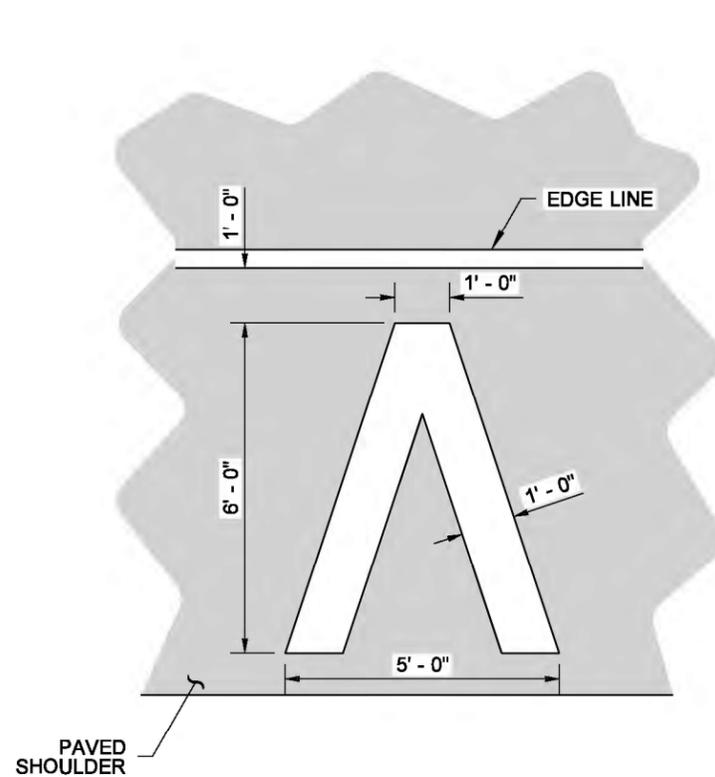
**SYMBOL MARKINGS ~
TRAFFIC ARROWS FOR
LOW-SPEED ROADWAYS
STANDARD PLAN M-24.40-02**

SHEET 2 OF 2 SHEETS

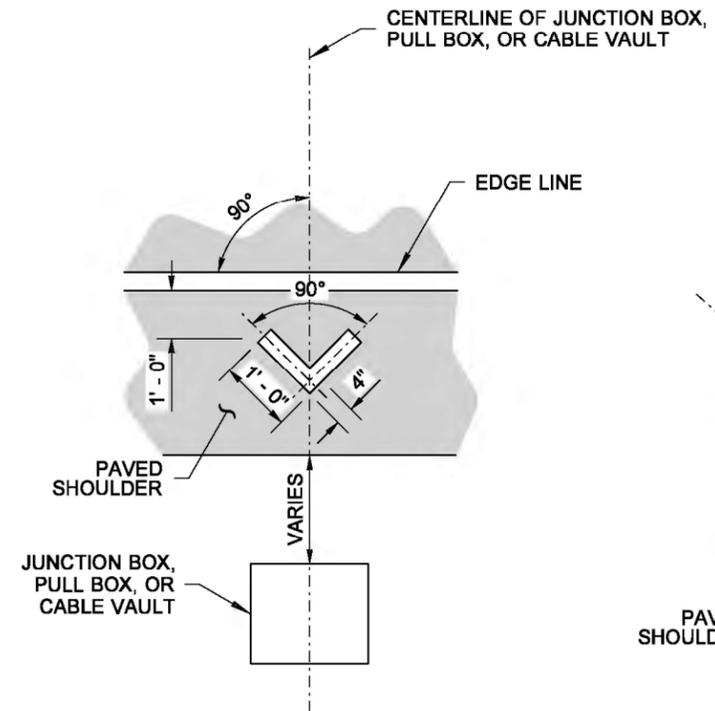
APPROVED FOR PUBLICATION
Bakotich, Pasco
Apr 20 2015 10:11 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation



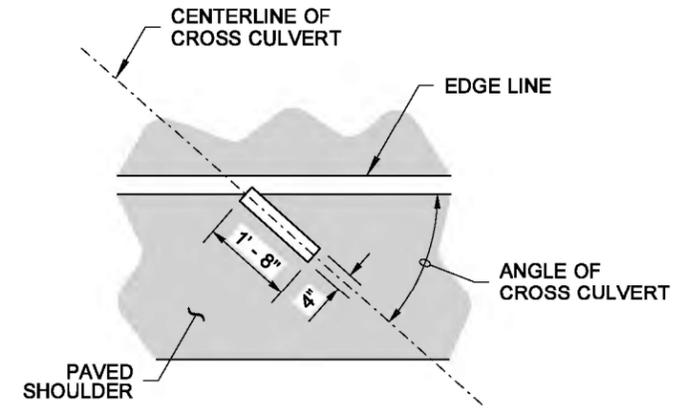
STOP LINE



**MARKING AREA = 11.73 SQ.FT.
HALF-MILE MARKER**

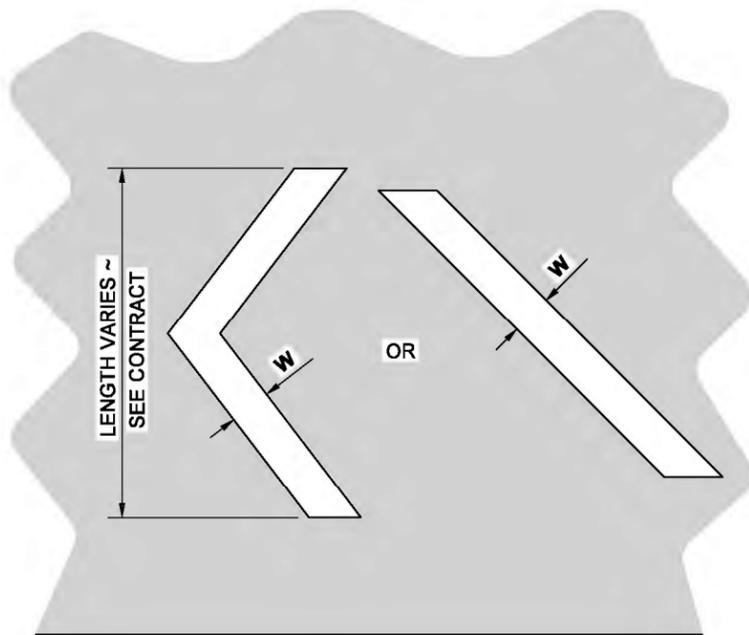


**MARKING AREA = 0.56 SQ. FT.
JUNCTION BOX, PULL BOX,
OR CABLE VAULT MARKINGS**



**MARKING AREA = 0.56 SQ.FT.
CROSS CULVERT**

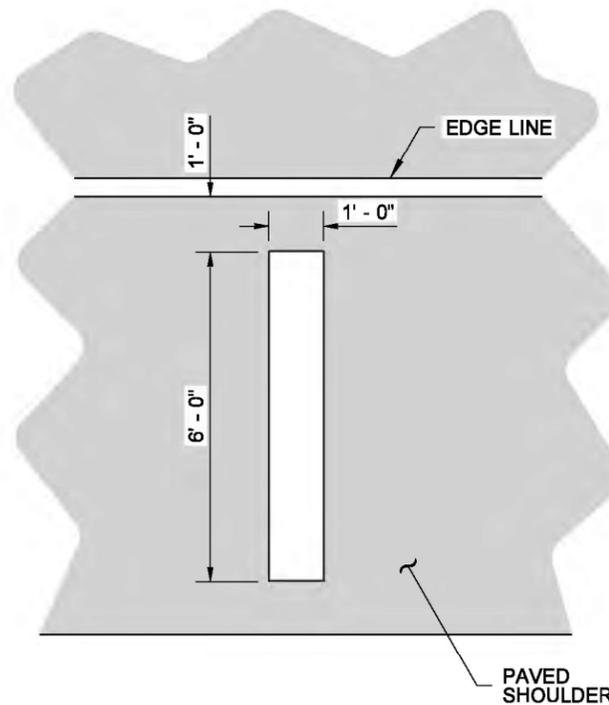
DRAINAGE MARKING



**WHITE OR YELLOW ~ SEE CONTRACT
CHEVRON OR DIAGONAL**

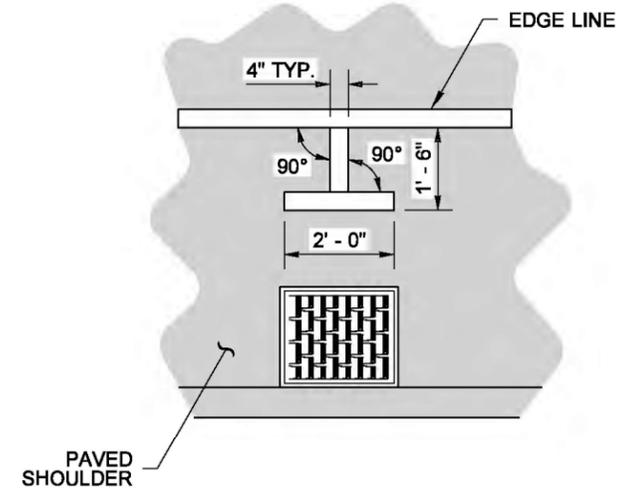
CROSSHATCH MARKING

W = 8" (IN) FOR POSTED SPEED LIMIT OF 40 MPH OR LOWER
W = 12" (IN) FOR POSTED SPEED LIMIT OF 45 MPH OR HIGHER



**MARKING AREA = 6.00 SQ.FT.
FULL MILE MARKER**

AERIAL SURVEILLANCE MARKERS



**MARKING AREA = 1.06 SQ.FT.
DRAINAGE STRUCTURE INLET**

DRAINAGE MARKING

NOTE

1. If Rumble Strips are present, install marking outside of the Rumble Strip.



Walsh, Brian
Jun 24 2014 2:35 PM

**SYMBOL MARKINGS
MISCELLANEOUS**

STANDARD PLAN M-24.60-04

SHEET 1 OF 2 SHEETS

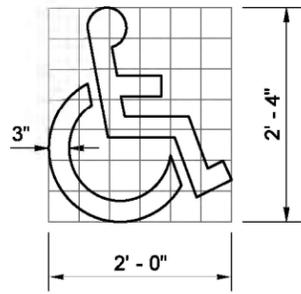
APPROVED FOR PUBLICATION

Bakotich, Pasco
Jun 24 2014 4:43 PM

STATE DESIGN ENGINEER

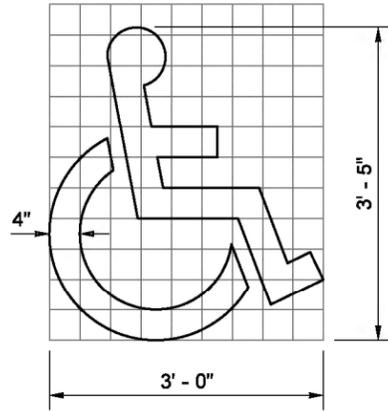


DRAWN BY: LISA CYFORD



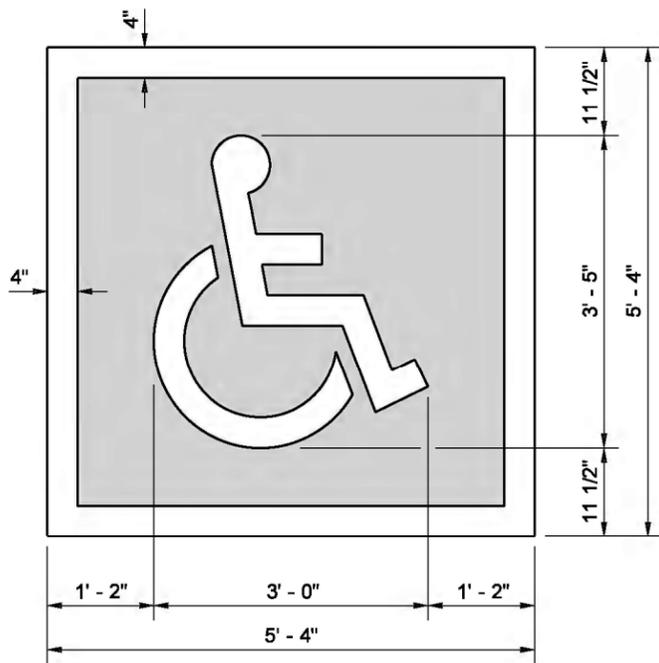
GRID IS 4" (IN) SQUARE MARKING AREA = 1.41 SQ.FT.

ACCESS PARKING SPACE SYMBOL (MINIMUM)



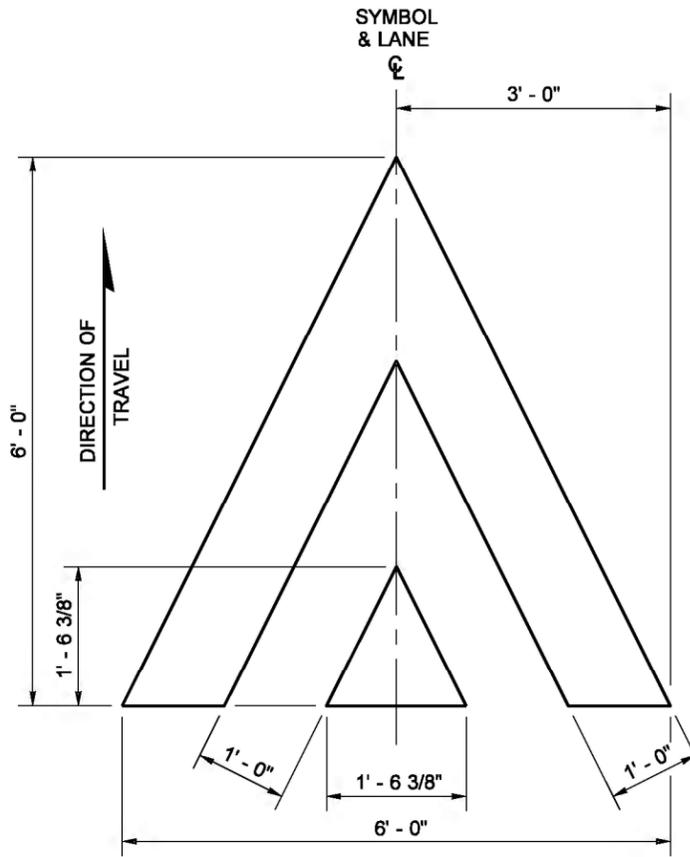
GRID IS 4" (IN) SQUARE MARKING AREA = 3.09 SQ.FT.

ACCESS PARKING SPACE SYMBOL (STANDARD)



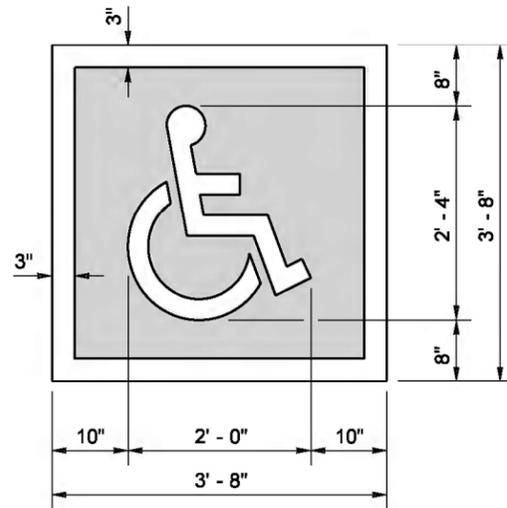
TOTAL MARKING AREA = 28.44 SQ.FT.
WHITE = 9.76 SQ.FT. BLUE = 18.69 SQ.FT.

ACCESS PARKING SPACE SYMBOL (STANDARD) WITH BLUE BACKGROUND AND WHITE BORDER (REQUIRED FOR CEMENT CONCRETE SURFACES)



MARKING AREA = 12.08 SQ.FT.

SPEED BUMP SYMBOL

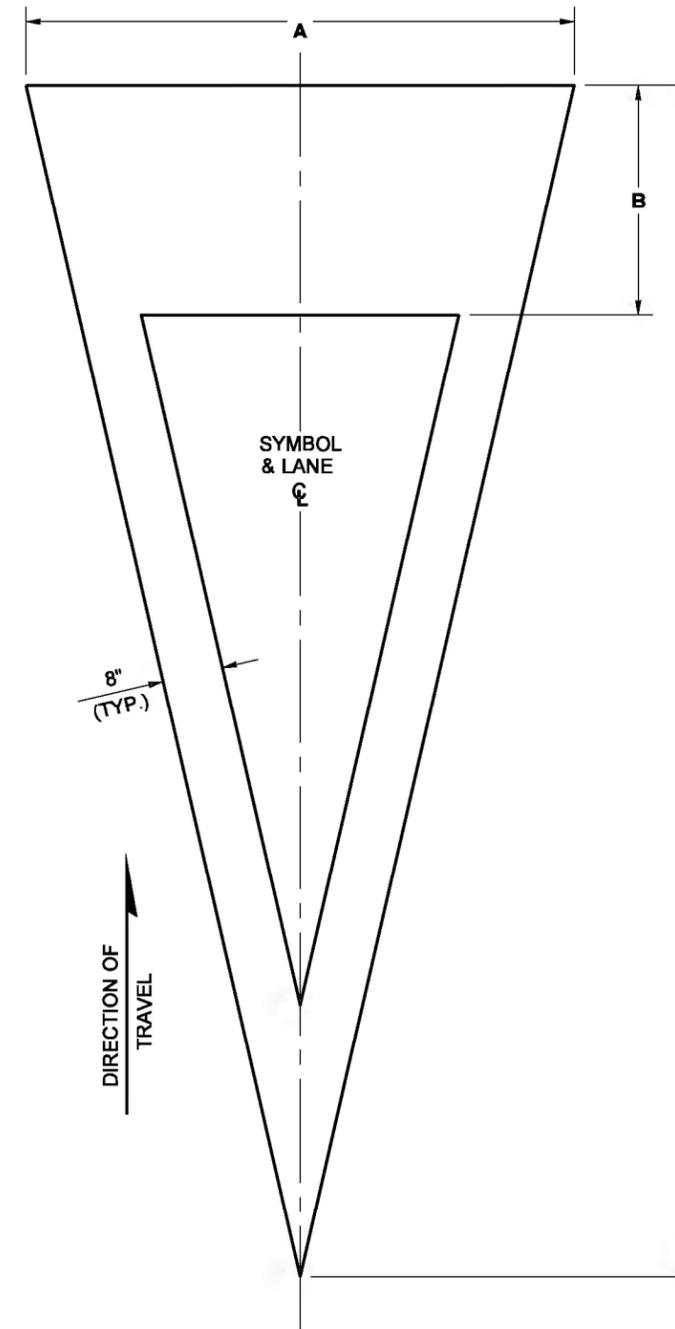


TOTAL MARKING AREA = 13.44 SQ.FT.
WHITE = 4.82 SQ.FT. BLUE = 8.62 SQ.FT.

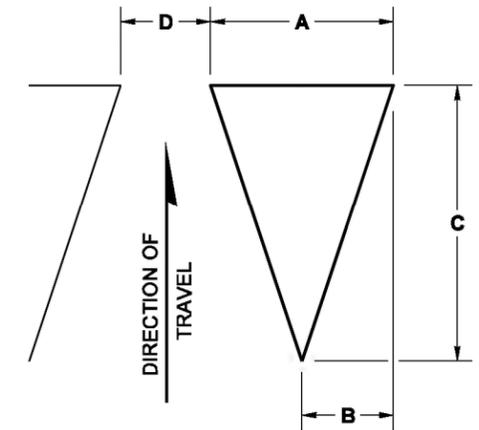
ACCESS PARKING SPACE SYMBOL (MINIMUM) WITH BLUE BACKGROUND AND WHITE BORDER (REQUIRED FOR CEMENT CONCRETE SURFACES)

SYMBOL MARKING		A	B	C	D	USE	MARKING AREA
YIELD AHEAD SYMBOL	TYPE 1	6' - 0"	2' - 6"	13' - 0"	N/A	LESS THAN 45 MPH	25.90 SQ.FT.
	TYPE 2	6' - 0"	3' - 0"	20' - 0"	N/A	45 MPH OR GREATER	36.54 SQ.FT.
YIELD LINE SYMBOL	TYPE 1	1' - 0"	6"	1' - 6"	6"	LESS THAN 45 MPH	0.75 SQ.FT.
	TYPE 2	2' - 0"	1' - 0"	3' - 0"	1' - 0"	45 MPH OR GREATER	3.00 SQ.FT.
	TYPE 2	2' - 0"	1' - 0"	3' - 0"	1' - 0"	ROUNDBOUNT ENTRY *	3.00 SQ.FT.

* MINIMUM OF 4 IN LANE



YIELD AHEAD SYMBOL



YIELD LINE SYMBOL (MULTIPLE SYMBOLS REQUIRED FOR TRANSVERSE YIELD LINE - SEE CONTRACT)



Walsh, Brian
Jun 24 2014 2:37 PM

SYMBOL MARKINGS MISCELLANEOUS

STANDARD PLAN M-24.60-04

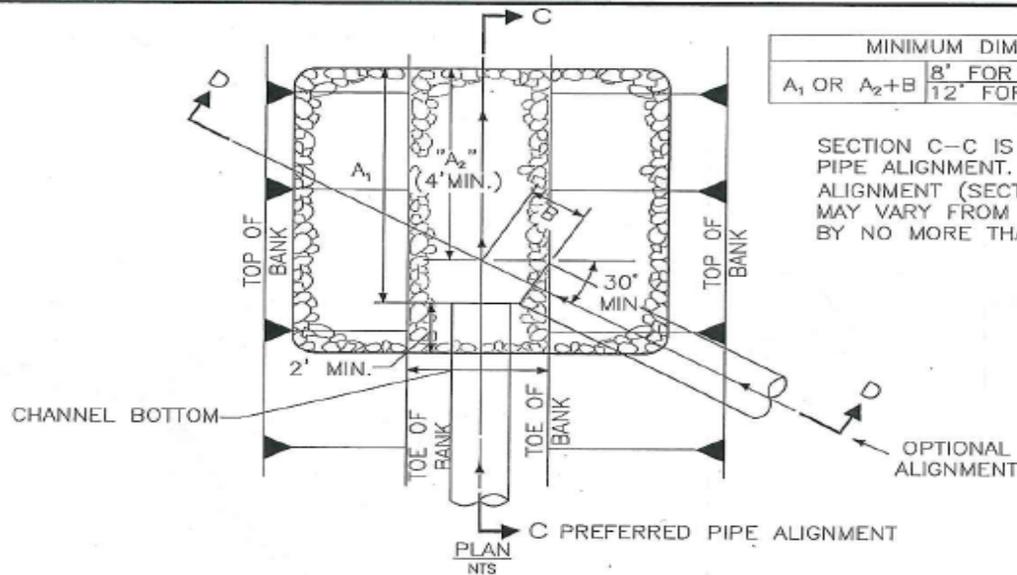
SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION

Bakotich, Pasco
Jun 24 2014 4:43 PM

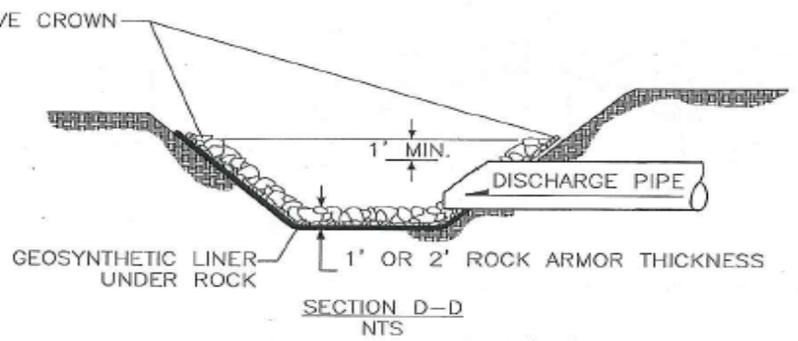
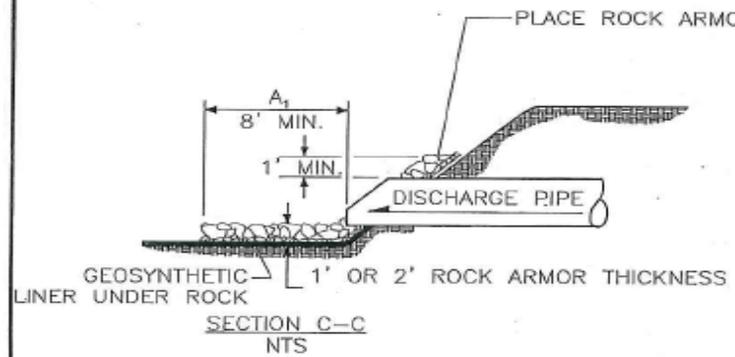
STATE DESIGN ENGINEER

Washington State Department of Transportation



MINIMUM DIMENSIONS	
A_1 OR A_2+B	8' FOR ROCK LINING
	12' FOR RIP RAP

SECTION C-C IS PREFERRED PIPE ALIGNMENT. OPTIONAL ALIGNMENT (SECTION D-D) MAY VARY FROM PREFERRED BY NO MORE THAN 60°



SNOHOMISH COUNTY PUBLIC WORKS

5-060 PIPE/CULVERT OUTFALL DISCHARGE PROTECTION PAD

APPROVED BY:

[Signature]
COUNTY ROAD ENGINEER

4/11/16
DATE

The following general notes are to be provided on all civil plans submitted for review which add, repair, or modify storm drainage systems.

Updated: June 2011

STORM DRAINAGE NOTES

1. See GENERAL PLAN NOTES for additional requirements.
2. All required storm water retention/detention facilities shall be constructed and operable prior to paving and building construction unless otherwise approved by Lynnwood Department of Public Works.
3. All pipes within the public right-of-way shall meet current WSDOT/APWA standards and specifications and/or as approved by the Director of Public Works and shall be installed per WSDOT section 7-08.
4. Backfill shall be placed equally on both sides of the pipe or pipe-arch in layers with a loose average depth of 6 inches, compacted to a density of 95%. Refer to WSDOT Std. Spec. 7-08.3(3) and Std. Spec. 2-03.3(14)C, Method B & C.
5. Where shown on the plans or where directed by the Engineer or Director of Public Works, the existing manholes, catch basins, or inlets shall be adjusted to the grade as staked. All pipe and structures shall be staked for survey line and grade prior to the start of construction. All conflicts shall be brought to the attention of the Engineer and Director of Public Works prior to commencing construction.
6. All storm catch basins with a depth over 5 feet to flow line shall be Type 2 structures per current WSDOT/APWA standards. All Type 1 and 2 structures shall be provided with locking bolts. Ladder access is required on all Type 2 structures when 4 feet or greater in depth as measured to the inside finish floor or as approved by the Director of Public Works.
7. Developer to provide a certified electronic video record of storm drainage construction after final cleaning. Final cleaning as required Per WSDOT Spec7-04.3(1) and as directed by the City of Lynnwood Public Works Inspector.
8. Drainage outlets (stub-outs) shall be provided for each individual lot, unless otherwise approved by the City of Lynnwood. Stub-outs shall conform to the following:
 - a) Each outlet shall be suitably located at the lowest elevation on the lot, so as to service all future roof downspouts and footing drains, driveways, yard drains, and any other surface or subsurface drains necessary to render the lots suitable for their intended use.
 - b) Each outlet shall have free flowing, positive drainage to an approved storm water conveyance system or an approved outfall location.
 - c) Outlets on each lot shall be located with a pressure treated 2"x4". Each marker board shall be clearly identifiable, protected and stubbed 5 feet above the finish grade.
 - d) All pipe material shall conform to the approved plans and/or current WSDOT/APWA

standards and specifications. All Substitutions are subject to approval by the Engineer and City of Lynnwood Director of Public Works prior to construction.

- e) 12 to 14 gauge tracer wire or locating tape shall be installed as required by the City of Lynnwood Public Works Inspector.
- f) Drainage easements are required for drainage systems designed to convey flows through individual lots. Verification and approval is required prior to construction.
- g) The applicant/contractor is responsible for coordinating the locations of all stub-out conveyance lines with respect to the utilities (e.g. power, gas, telephone, television).
- h) All individual stub-outs shall be privately owned and maintained by the lot home owner, shall be a minimum of 4 inch diameter, and shall be provided with backflow protection as required.

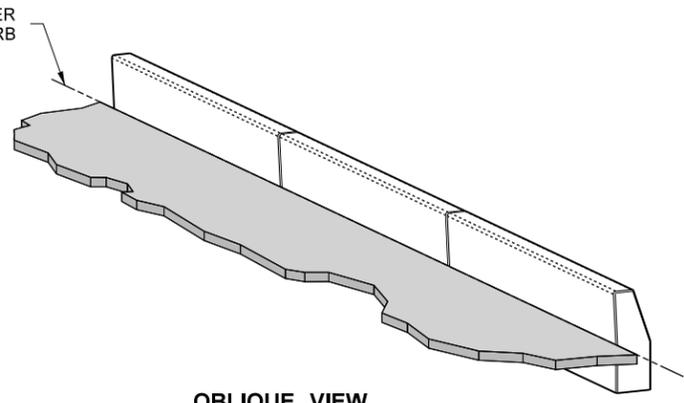
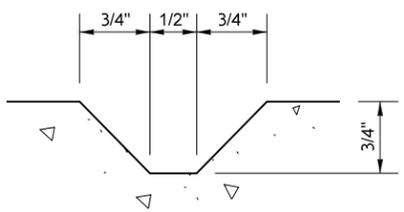
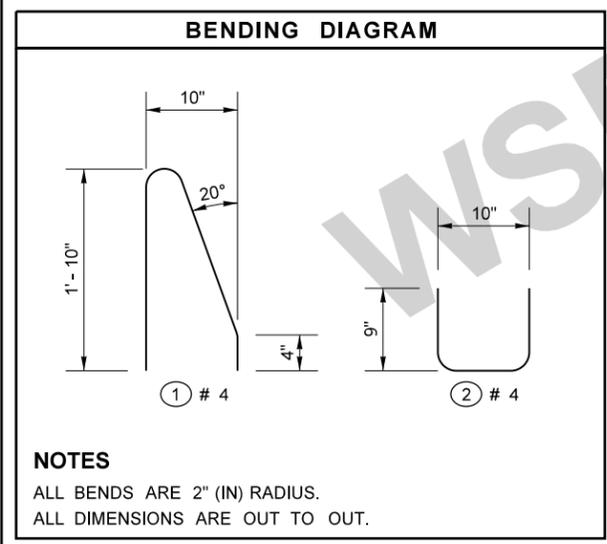
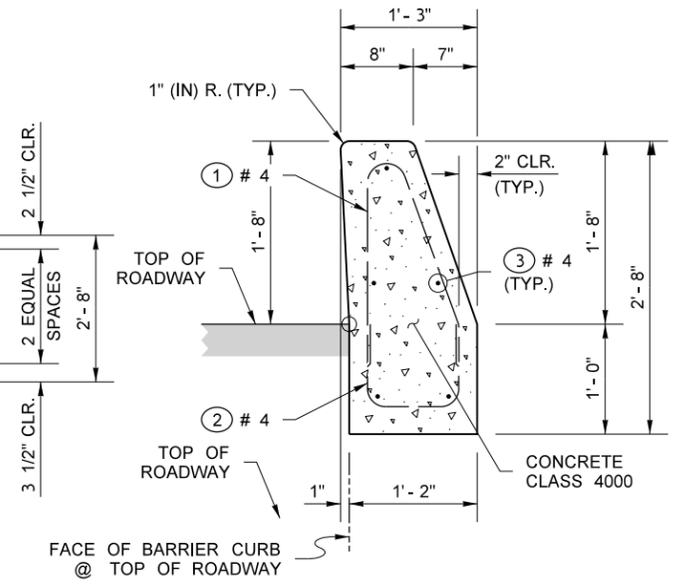
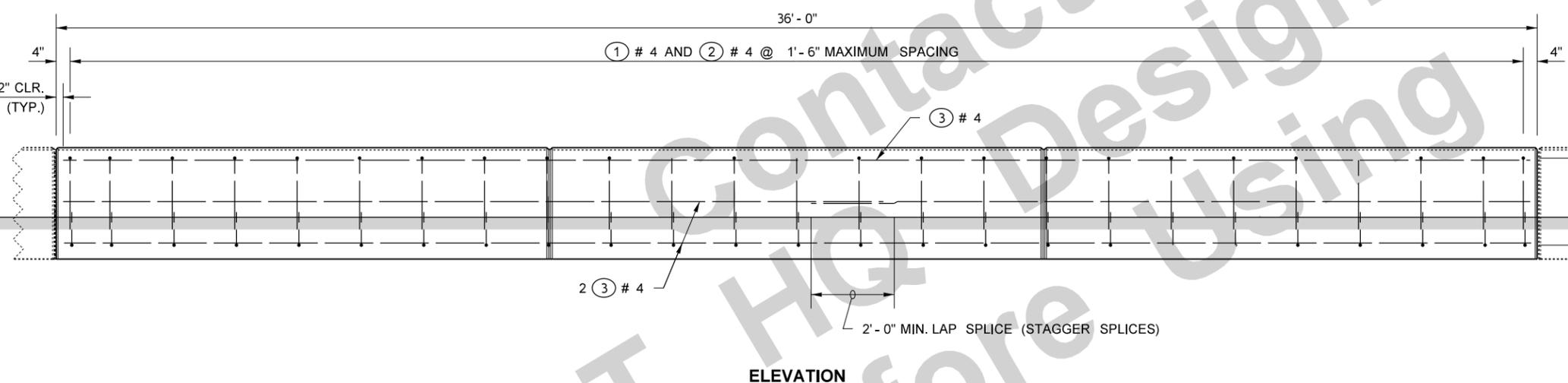
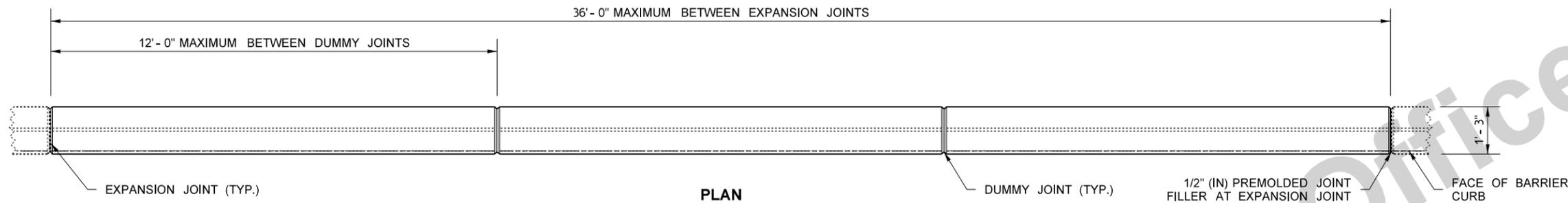
The following general notes are to be provided on all civil plans submitted for any proposal which requires Temporary Erosion and Sediment Control.

Updated: April 2020

TEMPORARY EROSION AND SEDIMENT CONTROL STANDARD NOTES

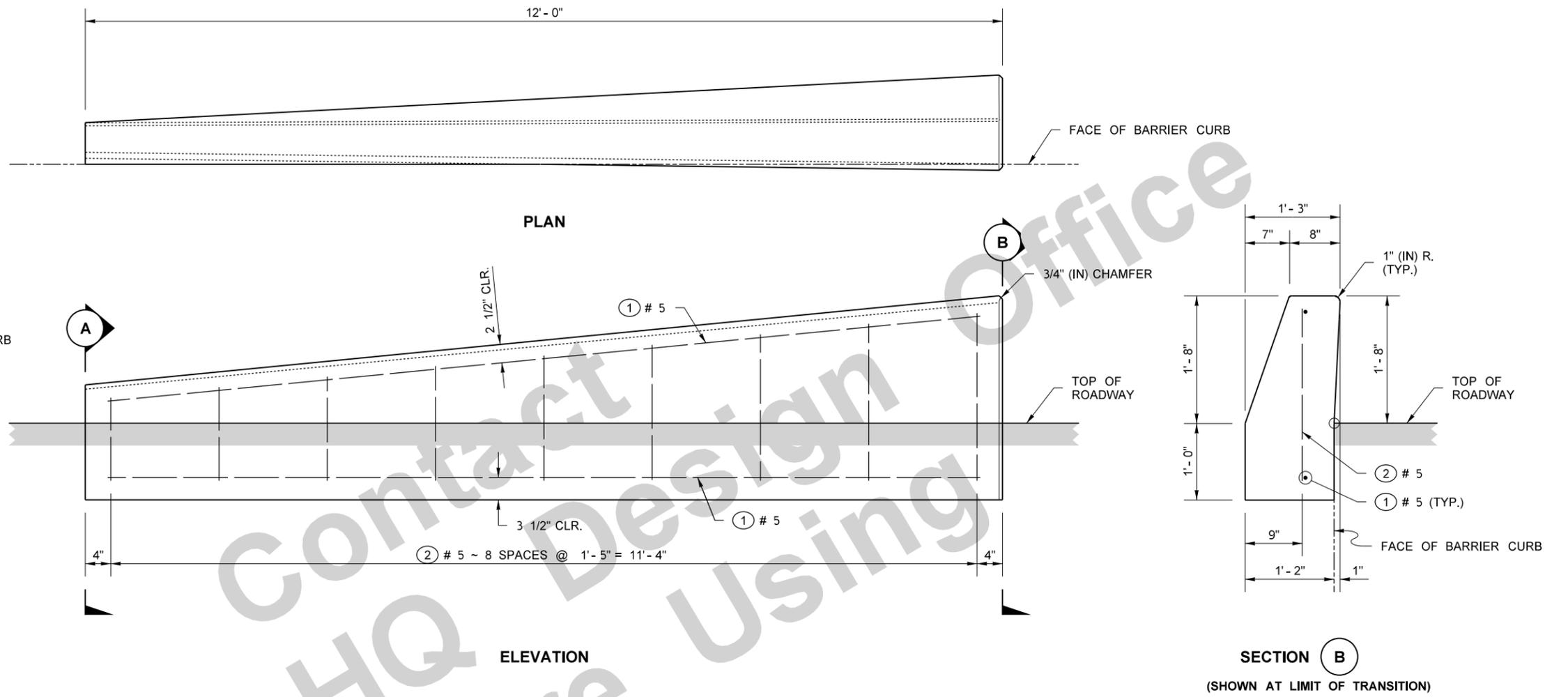
1. Refer to GENERAL PLAN NOTES for additional requirements.
2. Approval of this erosion/sedimentation control (ESC) plan does not constitute an approval of permanent road or drainage design (e.g. size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
3. The implementation of these ESC plans and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the applicant/contractor until all construction is approved, and the potential for on-site erosion has passed.
4. The boundaries of the clearing limits shown on this plan (including individual trees to be saved) shall be clearly flagged in the field prior to construction. During the construction period, no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the applicant/contractor for the duration of construction.
5. The ESC facilities shown on this plan must be constructed as outlined on the typical construction sequence and in such a manner as to insure that sediment laden water does not enter the drainage system or violate applicable water standards.
6. The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded (e.g. additional sumps, relocation of ditches and silt fences, etc.) as needed for unexpected storm events.
7. Construction access to the site shall be only as shown on the approved plans. All vehicles leaving the site, onto public rights of way, shall be cleaned to prevent "tracking" of mud, dirt or other debris.
8. The Contractor shall clean access streets and right-of-way using only vacuum sweepers at least daily or more frequently as may be necessary and so directed by the City.
9. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment laden water into the downstream system.

10. Stockpiles are to be located in safe areas and adequately protected by temporary secured plastic cover, seeding or mulching. Hydroseeding is preferred.
11. Where straw mulch for temporary erosion control is required, it shall be applied at a minimum thickness of two inches.
12. Any area stripped of vegetation, including roadway embankments, where no further work is anticipated for a period of 2 days during the wet season or 7 days during the dry, shall be immediately stabilized with the approved ESC methods (e.g. seeding, mulching, netting, erosion blankets, etc.).
13. Vegetation shall be established on areas disturbed or on areas of construction as necessary to minimize erosion. Areas to be rough graded with finished grading to follow near project completion are to be seeded with annual, perennial or hybrid rye grass. This also includes perimeter dikes and the sediment basin embankment. Hydroseeding is preferred.
14. Immediately following finish grading, permanent vegetation will be applied as approved per the approved plans, current WSDOT standards and specifications and the City of Lynnwood requirements.
15. Additional BMPs may be required at any time during construction

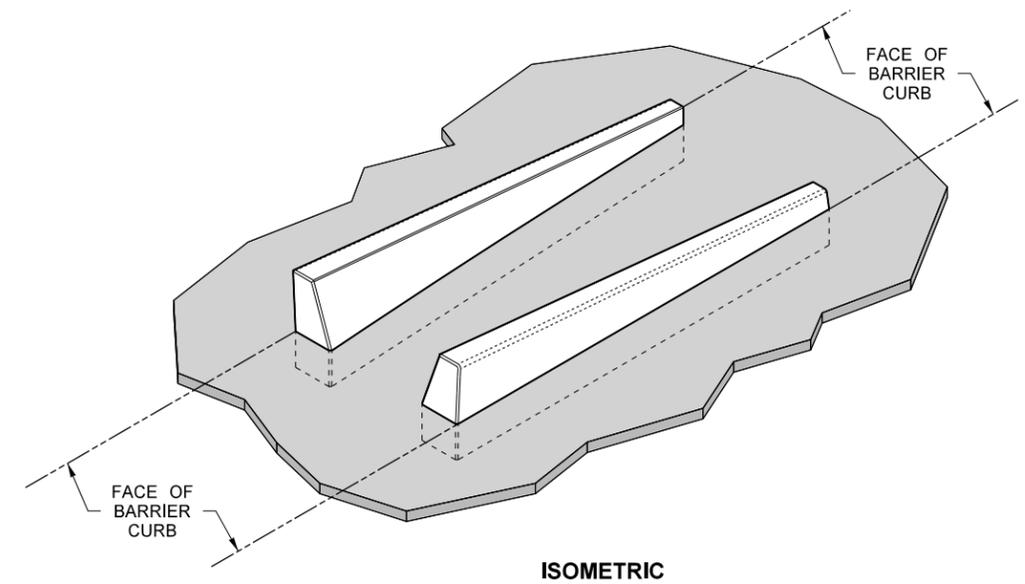


**LOW PROFILE BARRIER CURB TYPE 1
(CAST-IN-PLACE)**

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DATE	5/18/2020							TB-13
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DESIGNED BY				CONTRACT NO.				1
ENTERED BY				LOCATION NO.				OF
CHECKED BY								1
PROJ. ENGR.								SHEETS
REGIONAL ADM.	REVISION	DATE	BY					LOW PROFILE BARRIER CURB DETAILS



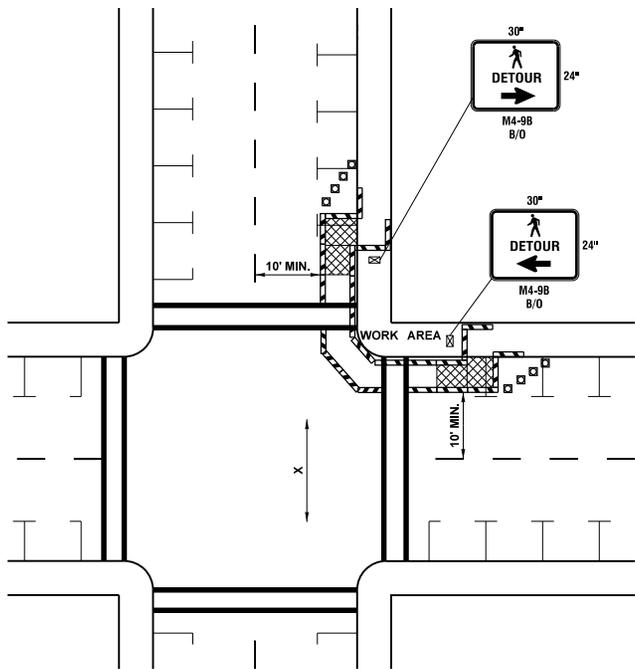
LOW PROFILE BARRIER CURB TRANSITION A



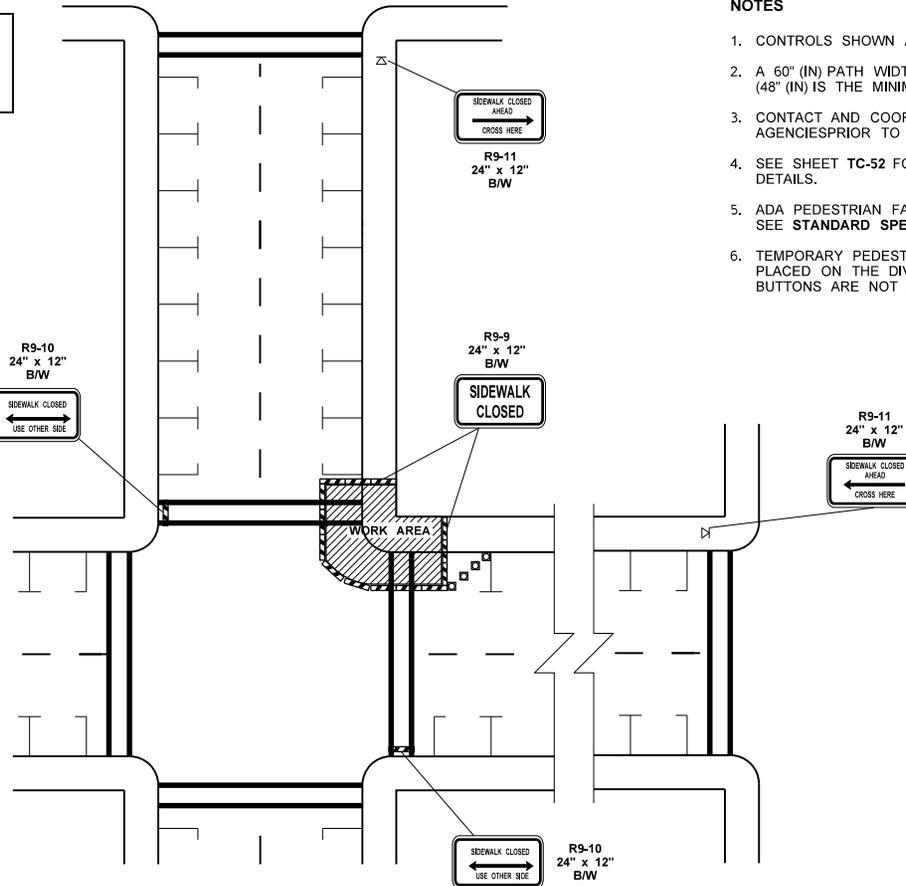
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ENTERED BY				LOCATION NO.				OF
CHECKED BY								1
PROJ. ENGR.								SHEETS
REGIONAL ADM.		REVISION	DATE	BY			LOW PROFILE BARRIER CURB DETAILS	

NO PARKING R8-3
24" x 30"
R/W

INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA
24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL.
PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.



SIDEWALK DIVERSION



SIDEWALK DETOUR

NOTES

1. CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2. A 60" (IN) PATH WIDTH SHOULD BE MAINTAINED (48" (IN) IS THE MINIMUM).
3. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
4. SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5. ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED. SEE STANDARD SPECIFICATION 1-10.2(1)B.
6. TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.

LEGEND

- ⊠ TEMPORARY SIGN LOCATION
- ⊠ CHANNELIZING DEVICES
- ▨ PEDESTRIAN CHANNELIZING DEVICES
- ▨ TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

FILE NAME	S:\Design_R_P&S\4-Standards\2-Plan Sheet Library\01-Published_PSL\TC Work Zone Traffic Control\TC-16 Intersection Pedestrian Traffic Control\TC-16.dgn				<p>Washington State Department of Transportation</p>	Plot 1
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CHECKED BY						
PROJ. ENGR.						
REGIONAL ADM.	REVISION	DATE	BY	CONTRACT NO.	LOCATION NO.	
						PEDESTRIAN CONTROL AND PROTECTION
				P.E. STAMP BOX	DATE	SHEET
				P.E. STAMP BOX	DATE	OF
						SHEETS

APPENDIX A
GEOTECHNICAL REPORT

**GEOTECHNICAL REPORT
Permit Submittal Review**

**Scriber Creek Trail
Lynnwood, Washington**

HWA Project No. 2018-102-21

**Prepared for
Parametrix**



GEOSCIENCES INC.

DBE/MWBE

Geotechnical Engineering
Pavement Engineering
Geoenvironmental
Hydrogeology
Inspection & Testing



GEOSCIENCES INC.

DBE/MWBE

July 21, 2021

HWA Project No. 2018-102-21

Parametrix

719 2nd Avenue, Suite 200
Seattle, Washington 98104

Attention: Jenny Bailey, P.E.

Subject: **GEOTECHNICAL ENGINEERING REPORT PERMIT REVIEW
SUBMITTAL
Scriber Creek Trail
Lynnwood, Washington**

Ms. Bailey:

As requested, HWA GeoSciences Inc. (HWA) has completed a geotechnical site investigation and related geotechnical engineering evaluations for the Scriber Creek Trail located in Lynnwood, Washington. The attached geotechnical report summarizes the results of our work and our geotechnical engineering recommendations to date.

We appreciate the opportunity to provide geotechnical engineering services on this project. If you have any questions regarding this report or require additional information or services, please contact the undersigned at your convenience.

Sincerely,

HWA GEOSCIENCES INC.

Bryan Hawkins, P.E.
Geotechnical Engineer

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APPENDICES

Appendix A: Field Exploration

Figure A-1	Legend of Terms and Symbols Used on Exploration Logs
Figures A-2 through A-20	Logs of Borings BH-1 through BH-19

Appendix B: Laboratory Test Results

Figures B-1 and B-2	Summary of Material Properties
Figures B-3 through B-9	Particle-Size Analysis of Soil
Figure B-10	Results of Atterberg Limit Tests

DRAFT

**GEOTECHNICAL ENGINEERING REPORT PERMIT REVIEW SUBMITTAL
SCRIBER CREEK TRAIL
LYNNWOOD, WASHINGTON**

1. INTRODUCTION

1.1 GENERAL

This report summarizes the results of a geotechnical engineering investigation undertaken by HWA GeoSciences Inc. (HWA) for the Scriber Creek Trail project. Our work included a field investigation program and geotechnical analyses associated with the proposed trail. The approximate location of the alignment is shown on the Site and Vicinity Map, Figure 1.

1.2 PROJECT DESCRIPTION

It is our understanding that the City of Lynnwood proposes to upgrade the Scriber Creek Trail, which runs approximately 0.75 miles from Wilcox Park to the Lynnwood Transit Center. The City would like to address issues of flooding and improve trail conditions and pedestrian accessibility. This will include widening the trail along the alignment and the construction of new boardwalks, retaining walls and bridge crossings. The trail alignment is shown in the Site and Exploration Plans, Figures 2A through 2C.

2. FIELD EXPLORATION AND LABORATORY TESTING

2.1 FIELD EXPLORATION

HWA conducted a subsurface exploration program that consisted of drilling nineteen borings, designated BH-1 through BH-19, between July 1 and 10, 2019. All borings were drilled by Geologic Drill Partners, Inc. of Bellevue, Washington, under subcontract to HWA. Borings BH-1 through BH-11 and BH-14 through BH-19 were drilled using a Bobcat-mounted Mini Drill Rig and ranged in depth from 10.75 to 41.5 feet below ground surface (bgs). Borings BH-12 and BH-13 were drilled using a Deep Rock XL drill rig and extended to depths of 9 and 15.5 feet bgs, respectively. The locations of the borings are shown on the Site and Exploration Plans, Figures 2A through 2C.

In each of the boreholes, Standard Penetration Test (SPT) sampling was performed using a 2-inch outside diameter split-spoon sampler driven by a 140-pound hammer raised using a rope and cathead system. During the SPT, samples were obtained by driving the sampler 18 inches into the soil with the hammer free-falling 30 inches. The numbers of blows required for each 6 inches of penetration were recorded. The Standard Penetration Resistance (“N-value”) of the soil is calculated as the number of blows required for the final 12 inches of penetration. This

resistance, or N-value, provides an indication of relative density of granular soils and the relative consistency of cohesive soils; both indicators of soil strength.

A geotechnical engineer from HWA recorded all pertinent information including soil sample depths, stratigraphy, soil engineering characteristics, and ground water occurrence. Soil samples obtained from the boreholes were classified in the field and representative portions were sealed in plastic bags. These soil samples were then taken to our Bothell, Washington, laboratory for further examination and testing. The stratigraphic contacts shown on the individual exploration logs represent the approximate boundaries between soil types; actual transitions may be more gradual. The soil and groundwater conditions depicted are only for the specific date and locations reported and, therefore, are not necessarily representative of other locations and times. A legend of the terms and symbols used on the exploration logs is presented in Figure A-1. Summary logs of the borehole explorations are presented in Figures A-2 through A-12.

2.2 LABORATORY TESTING

Representative soil samples obtained from the explorations were placed in plastic bags to prevent loss of moisture and transported to our Bothell, Washington, laboratory for further examination and testing. Laboratory tests were conducted on selected soil samples to characterize relevant engineering and index properties of the soils. The tests include visual classifications, natural moisture and organic content determinations, grain size distribution analyses and Atterberg Limits (plasticity characteristics). The tests were conducted in general accordance with appropriate American Society of Testing and Materials (ASTM) standards and are discussed in further detail in Appendix B. The test results are also presented in Appendix B, and/or displayed on the exploration logs in Appendix A, as appropriate.

3. SITE CONDITIONS

3.1 EXISTING SITE CONDITIONS

The existing Scriber Creek Trail extends approximately 0.75 miles from Wilcox Park to the Lynnwood Transit Center. The project alignment has been divided into three segments and are described below from north to south. Figure 2A through 2C show the locations of each segment. Flooding was observed in Segment 1 and Segment 3 of the trail alignment at the time of our explorations. Most of the trail alignment is located within existing wetlands.

Segment 1, Figure 2A, begins at the north and extends from Wilcox Park south towards 200th Street SW, through Scriber Lake Park. There are two proposed bridge crossings over Scriber Creek in this segment of the trail alignment. Various sections of elevated fiber grate boardwalk structures are also proposed.

July 21, 2021

HWA Project No. 2018-102-21

Segment 2, Figure 2B, starts from the south end of Segment 1, north of Sprague Mini Pond, and follows the south side of 200th Street SW to the east. Segment 2 then crosses Cedar Valley Road and runs south to Scriber Creek Park. Approximately 350 feet of Hollowcore boardwalk are proposed along the south side of 200th Street SW.

Segment 3, Figure 2C, begins at the end of Segment 2 at Scriber Creek Park and extends eastward through the park and ends at the Lynnwood Transit Center. There is 1 bridge crossing proposed and approximately 550 feet of elevated fiber grate boardwalk proposed.

3.2 GENERAL GEOLOGIC CONDITIONS

The site is located in the central portion of the Puget Sound Lowland, an elongated topographic and structural depression bordered by the Cascade Mountains on the east and the Olympic Mountains on the west. The Lowland is characterized by low-rolling relief with some deeply cut ravines. In general, the ground surface elevation is within 500 feet of sea level. The Puget Lowland was filled to significant depths by glacial and non-glacial sediments during the Pleistocene Epoch, although bedrock does outcrop in scattered locations throughout the area. Generally, the rock is deeply buried by Pleistocene and recent sediments.

Geologists have generally agreed that the Puget Sound area was subjected to four or more major glaciations during the Pleistocene Epoch. Ice for these glacial events originated in the Coastal Mountains and the Vancouver Range of British Columbia. The maximum southward advance of ice was about halfway between Olympia and Centralia. The Pleistocene stratigraphic record in the central portion of the Puget Lowland is a complex sequence of glacially-derived and interglacial sediments. Erosion of certain deposits, as well as local deposition of sediments, further complicate the geologic setting.

Geologic information for the project area was obtained from the *Geologic Map of the Edmonds East and Part of the Edmonds West Quadrangles, Washington* (Minard, 1983). According to this map, the project alignment is underlain by younger alluvium and this deposit is mapped as extending across the entire project alignment. Younger alluvium consists of mostly sands and gravels with some organic rich mud.

3.3 SUBSURFACE CONDITIONS

The soil conditions along the project alignment include varying amounts of fill soils underlain by peat, alluvium, and advance outwash deposits. Each major soil unit is described below, with materials interpreted as being youngest in origin and nearest to the surface described first.

- **Fill/Topsoil:** Layers of fill/topsoil were encountered in borings BH-1 through BH-14 and ranged in depths from 1.5 feet to 7.5 feet deep. The fill deposits generally consisted of very loose to medium dense, silty, fine to medium sand, with varying amounts of gravel. The fill in borings BH-2, BH-3, and BH-10 contained trace to abundant organics.

July 21, 2021

HWA Project No. 2018-102-21

- **Peat**: Very soft to soft peat was encountered in all of the borings except in borings BH-14 and BH-15. In boring BH-11, stiff to very stiff peat was encountered. All borings with peat consisted of abundant organics such as intact roots, bark, and wood debris. In borings BH-1, BH-3, BH-11, and BH-13, where the sampler was driven through a piece of wood, blows are likely overstated. Peat thicknesses ranged from 2.5 to 29 feet and was greatest in borings BH-2 and BH-5, where the peat measured between 28 and 29 feet thick. This unit is highly compressible and large settlements should be anticipated if loads greater than existing are applied. In addition, ongoing secondary consolidation, resulting from organic decay, will also result in future settlements of this layer.
- **Alluvium**: An alluvium deposit was observed in borings BH-11 and BH-14 and consisted of medium stiff, sandy silt to medium dense silty sand and gravel. In boring BH-11, the alluvium was about 6 feet thick with moderate rust mottling and scattered organics and gravels. In boring BH-14, the alluvium was about 2.5 feet thick with a 2-inch lens of coarse sand. The alluvium is also somewhat compressible, though considerably less than the peat.
- **Advance Outwash**: Advance outwash was encountered in all of the borings and all borings were terminated in this deposit. In borings BH-13 through BH-15, the upper layer of advance outwash appeared weathered. The advance outwash layer was encountered at depths of 5 to 32 feet bgs. The advance outwash encountered consisted primarily of medium dense to very dense, slightly gravelly, silty to clean, fine to medium sand. Scattered organics and coarse sand were typically encountered. This unit was deposited ahead of the advancing glaciers and has been glacially overridden resulting in its dense configuration. The advance outwash will provide good bearing for foundation elements.

3.4 GROUNDWATER

Groundwater was observed in nearly all borings and is typically within 5 to 10 feet bgs. In borings BH-2, BH-6, BH-17, BH-18 and BH-19, perched groundwater was encountered from ground surface to 2.5 feet bgs. We anticipate that groundwater levels vary seasonally, with the highest water levels in the wet winter months.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 GENERAL

The proposed trail alignment site is primarily underlain by a sequence of fill over compressible wetland deposits (peat) and alluvium over dense advance outwash. In general, the dense advance outwash deposit will provide adequate support for the proposed trail boardwalks, bridges, and retaining walls.

The very soft to soft peat and alluvium deposits compressible soils are subject to consolidation settlements with the application of additional loads. Small diameter piles (pin piles) are recommended for support of the proposed boardwalks and bridges. HWA recommends the implementation of mitigation measures to reduce anticipated settlements for the proposed retaining walls. Recommended mitigation measures could include over-excavation of compressible soils and replacement with structural fill, preloading, deep foundation supported structures and placement of lightweight fill. Given the highly moisture sensitive nature of the soils encountered, we recommend all earthwork related to retaining walls occur during the dry summer months. Significant construction problems associated with groundwater levels and wet soils conditions should be anticipated if earthwork is performed during wet weather.

4.2 SEISMIC CONSIDERATIONS

The contribution of potential earthquake-induced ground motion from known sources is included in the probabilistic ground motion maps developed by the USGS. Design data seismic site characterization and design recommendations based on USGS mapping and analysis are implemented in the 2018 International Building Code (IBC). As part of this code, the design of structures must consider dynamic forces resulting from seismic events. These forces are dependent upon the magnitude of the earthquake event as well as the properties of the soils that underlie the site.

As part of the procedure to evaluate seismic forces, the 2018 IBC requires the evaluation of the Seismic Site Class, which categorizes the site based upon the characteristics of the subsurface profile 100 feet below the proposed foundations. As a result, the Site Class to be determined in accordance with Section 20.3 and the corresponding values of F_a and F_v can be determined from Tables 11.4-1 and 11.4-2 of ASCE 7-16. Much of the site is underlain by 10 feet or more of organic peat, as identified in our geotechnical explorations, these sections of the site should be considered Site Class E. However, the areas around Boardwalks 1, 2 and 3 were observed to have less than 10 feet of peat below them and based on blow counts obtained from the site explorations should be considered Site Class D. In Section 11.4.8 of ASCE 7-16, it is stated that a site-specific ground motions hazard analysis is required on sites with three additional conditions.

1. Seismically isolated structures and structures with dampening systems on site with S_1 greater than or equal to 0.6.
2. Structures on Site Class E sites with S_s greater than or equal to 1.0.
3. Structures on Site Class D and E sites with S_1 greater than or equal to 0.2.

Condition 1 should be determined by the project structural engineer but is assumed to not apply to the proposed site improvements. Conditions 2 and 3 would necessitate performing a site-specific ground motions hazard analysis on this site; however, three exceptions are provided, in Section 11.4.8 of ASCE 7-16, to determine seismic design parameters without performing a site-specific ground motions hazard analysis. These exceptions are:

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1. Structures on site Class E site with S_s greater than or equal to 1.0, provided the site coefficient F_a is taken to be equal to that of Site Class C.
2. Structures of Site Class D sites with S_1 greater than or equal to 0.2, provided the value of the seismic response coefficient (C_s) is determined by Eq 12.8-2 of ASCE 7-16 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 of ASCE 7-16 for $T_L \geq T > 1.5T_s$, or Equation 12.8-4 of ASCE 7-16 for $T > T_L$.
3. Structures on Site Class E sites with S_1 greater than or equal to 0.2, provided that T is less than or equal to T_s and the equivalent static force procedure is used for design.

Please note that unless a site-specific ground motions hazard analysis is performed, the requirements in exception 2 for boardwalks 1, 2 and 3, and exception 1 and 3, for other parts of the site will need to be followed.

Should the information used as a basis for this design be incorrect, HWA should be notified to provide appropriate recommendations. The associated probabilistic ground acceleration values and site coefficients for the general site area were obtained from the Applied Technology Council Seismic Hazard Maps. The risk targeted seismic values and coefficients for boardwalks 1, 2 and 3 and the remainder of the site are presented in Tables 1 and 2 below.

Table 1: Ground Motion Values, Site Class D* for Boardwalks 1, 2 and 3

Period (sec)	Mapped MCE Spectral Response Acceleration (g)		Site Coefficients		Adjusted MCE Spectral Response Acceleration (g)		Design Spectral Response Acceleration (g)		Transition Point	Period (sec)
	PGA	0.558	F_{PGA}	1.100	$PGAM$	0.614	-	-		
0.0	PGA	0.558	F_{PGA}	1.100	$PGAM$	0.614	-	-	T_0	0.130
0.2	S_s	1.302	F_a	1.000	S_{Ms}	1.302	S_{Ds}	0.868	T_s	0.650
1.0	S_1	0.460	F_v	1.840	S_{M1}	0.846	S_{D1}	0.564	T_L	6

Notes: *2% Probability of Exceedance in 50 years for Latitude 47.8204° and Longitude -122.3070°
 Northern most portion of the alignment had slightly higher ground motion values than the southern portion and but are appropriate for the entire alignment.
 PGA = Peak ground acceleration FPGA = PGA site coefficient
 $PGAM$ = Maximum considered earthquake geometric mean peak ground acceleration adjusted for Site Class effects
 S_s = Short period (0.2 second) Mapped Spectral Acceleration
 S_1 = 1.0 second period Mapped Spectral Acceleration
 S_{Ms} = Spectral Response adjusted for site class effects for short period = $F_a \cdot S_s$
 S_{M1} = Spectral Response adjusted for site class effects for 1-second period = $F_v \cdot S_1$
 S_{Ds} = Design Spectral Response Acceleration for short period = $2/3 \cdot S_{Ms}$
 S_{D1} = Design Spectral Response Acceleration for 1-second period = $2/3 \cdot S_{M1}$
 F_a = Short Period Site Coefficients
 F_v = Long Period Site Coefficients
 T_0 = $0.2 \cdot S_{D1} / S_{Ds}$
 T_s = S_{D1} / S_{Ds}
 T_L = Long Period Transition period

Table 2: Ground Motion Values, Site Class E* for Remainder of Site

Period (sec)	Mapped MCE Spectral Response Acceleration (g)		Site Coefficients		Adjusted MCE Spectral Response Acceleration (g)		Design Spectral Response Acceleration (g)		Transition Point	Period (sec)
	PGA	0.558	F_{PGA}	1.142	PGAM	0.637	-	-		
0.0	PGA	0.558	F_{PGA}	1.142	PGAM	0.637	-	-	T_0	0.134
0.2	S_s	1.302	F_a	1.200	S_{Ms}	1.562	S_{Ds}	1.042	T_s	0.671
1.0	S_l	0.460	F_v	2.280	S_{Ml}	1.049	S_{Dl}	0.699	T_L	6

Based on Tables 11.6-1 and 11.6-2 (of ASCE 7-16), the Seismic Design Category for both site class areas is “D”.

4.2.1 Liquefaction

The potential for soil liquefaction effects must be considered during the design of any soil-supported structure. Soil liquefaction is a phenomenon where loose, saturated, granular deposits temporarily lose strength and behave as a liquid in response to moderate to strong earthquake shaking.

The proposed site is primarily underlain by wetland deposits (peat) over advance outwash. The deposits of peat underlying the site will not undergo liquefaction given its fibrous composition. The underlying advance outwash deposit encountered was typically dense to very dense. Given the density of these soils, liquefaction is unlikely and will not be a design consideration.

4.3 CONSOLIDATION SETTLEMENTS

The trail alignment is susceptible to consolidation settlement of the underlying compressible soils. Consolidation settlement results from the application of static loading on compressible soil deposits that are saturated and have not previously experienced similar loading conditions. Consolidation settlement occurs as both primary consolidation (short term consolidation) and secondary consolidation (long term consolidation). Both mechanisms are described below.

Primary consolidation initiates immediately upon the application of load and is a result of pore water being expelled from the void space within the soil unit. As load is applied, the pore water pressure increases within the soil unit and slowly decreases as the pore water is expelled from the soil. As this process continues the void space is reduced and the volume of the soil deposit decreases. This decrease in the volume results in a reduction in the thickness of the soil unit which manifests as settlement at the ground surface. The magnitude of primary consolidation is dependent on the geometry of the compressible soil unit, with respect to the applied load, and the compressibility properties of the soils.

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Secondary compression is a settlement phenomenon that occurs in soil deposits after completion of the primary consolidation stage and can continue for many years. The magnitude of the secondary compression settlement is difficult to predict but is typically a small fraction (5 to 10%) of the settlement that occurs as primary consolidation for most mineral soils. For peat, on the other hand, secondary compression has been observed to be a significant amount of the total settlement.

Given the time that has elapsed since placement of fill in the area, we expect that primary consolidation is complete and a significant amount of the secondary consolidation has occurred. Therefore, as long as the load on the subsurface soils is not increased, we do not expect any additional primary consolidation to occur. However, given the organic nature of the subsurface soils we do expect that secondary consolidation settlements will continue to occur through the design life of the trail.

We were not aware of grade increases and the necessity for retaining walls at the time our explorations and laboratory tests were performed; hence no consolidation laboratory testing was conducted, as we assumed all structures would be supported on piles bearing in the advance outwash soils. If estimates of settlements for grade supported structures (walls) are required, additional borings should be completed, and Shelby tube sampling be performed in the peat deposits so that this testing can be performed.

4.4 RETAINING WALL DESIGN

We understand that various walls will be required along the project alignment due to trail widening and bridge approaches. The proposed wall locations for Phase 1 of Scriber Creek Trail (Sta 200+00 to 218+15) were provided by Parametrix in their 30% Plan Submittals. We understand that there are no walls planned for Phase 2 (Sta 100+00 to 120+62). Table 2 provides a summary of the walls for Phase 1, including the approximate wall locations, whether the wall is a cut or fill wall, estimated maximum wall height, and relevant borings.

Table 2. Summary of Wall Types and Locations

Wall No.	Approximate Wall Stationing and Location	Cut or Fill	Estimated Exposed Wall Height (ft)	Relevant Boring
6	203+50 (East Side)	Fill	4.5	BH-10
7	203+00 (West Side)	Fill	3	BH-10
8	209+10 (West Side)	Fill	2	BH-4
9	209+10 (East Side)	Fill	2.5	BH-4
10	210+50 (West Side)	Fill	3.5	BH-4
11	210+50 (East Side)	Fill	4	BH-1
12	213+50 (West Side)	Fill	4	BH-1
13	215+00 (South Side)	Cut	2.5	BH-1
14	216+00 (South Side)	Fill	1	BH-1

4.4.1 Block Wall Design

We recommend gravity block walls be used for walls with retained heights of less than 3 feet of exposed wall height. The gravity block wall type recommended consists of blocks with dimensions of the order of 18 inches wide by 12 to 21 inches deep, by 8 inches tall, such as Keystone® blocks, and are referred to as "Modular Block" walls. Modular block walls consist of small, relatively light blocks and are suitable for all walls except Walls 6, 10, 11 and 12. We assume that the proposed walls will consist of a proprietary wall system and that the wall supplier will design the walls for internal stability. The walls should be designed in accordance with AASHTO Standard Specifications for Highway Bridges. We recommend the walls be designed using the parameters presented in Table 3. For the Extreme Event I Limit State, the wall should be designed for a horizontal seismic acceleration coefficient k_h of one-half the peak ground acceleration or 0.222 g and a vertical seismic acceleration coefficient k_v of 0.0 g (assuming the wall is free to move during a seismic event).

Table 3. Recommended Design Parameters for Block Walls

Soil Properties	Wall Backfill*	Retained Soil*	Foundation Soil
Unit Weight (pcf)	135	135	100
Friction Angle (deg)	38	36	28
Cohesion (psf)	0	0	0
		AASHTO Load Group 1	AASHTO Load Group 2
Allowable Bearing Capacity (psf)		1,000	1,300
Horizontal Seismic Acceleration Coefficient (k_h)		N/A	0.318

* *Gravel Borrow*, as specified in Section 9-03.14(1) of WSDOT *Standard Specifications*

An unfactored coefficient of friction of 0.5 times the effective stress at the base of the wall can be used for sliding resistance. Embedment depths of the blocks should be at least 6 inches for cut walls and 1 foot for fill walls with slopes above and below the walls no steeper than 2H:1V.

Given the compressible soils below the wall locations, settlement of these walls is expected. Settlement values for walls less than 3 feet are likely to be small, on the order of several inches. However, this may require periodic maintenance in the future. If some level of settlement is not tolerable, one of the methods presented below should be used to mitigate this.

4.4.2 Block Wall Subgrade Preparation

Subgrade preparation for the modular block gravity walls is important to limit differential settlement and maintain global stability. Proper wall construction and drainage are essential to prevent premature failure of the wall system. The wall should also be constructed on a properly prepared subgrade to limit deformation of the wall. We recommend all earthwork occur during

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the dry summer months. We expect the soil conditions at the locations of most of the walls to consist of loose to medium dense, silty sand.

Prior to placement of blocks the subgrade soils should be thoroughly compacted to at least 95% of modified Proctor maximum dry density. As indicated above, this may require over-excavation and placement of separator fabric and geogrid to stabilize subgrade soils prior to placement of fill. Subgrade preparation should include placement of a leveling pad to support the block wall. We recommend the bottom course of blocks be placed on a 6-inch-thick leveling pad consisting of Crushed Surfacing Top Course (CSTC), as specified in Section 9-03.9(3) of the *Standard Specifications* (WSDOT, 2020). The CSTC should be compacted to at least 95 percent of the modified Proctor maximum dry density, as determined by ASTM D 1557. This leveling pad should be graded to establish the proper wall batter.

4.4.3 Block Wall Drainage

A 4- to 6-inch-diameter perforated drainpipe should be installed behind the base of the block wall to collect and convey seepage from behind the wall. The drainpipe should be bedded and backfilled with Gravel Backfill for Drains, as specified in Section 9-03.12(4) of the *Standard Specifications* (WSDOT, 2020). The drainpipe should be sloped to drain and routed to an appropriate discharge location.

4.4.4 Retaining Wall Settlement Mitigation Options

For walls greater than 3 feet in height, or if settlement is not tolerable for shorter walls, we recommend that options to mitigate settlements be evaluated, as settlement values are likely to be excessive. There are several options that could be implemented to reduce or eliminate settlement issues. These options include over-excavation and replacement, preloading, lightweight fill and deep foundation supported structures. A description of each of these options is provided below.

- **Over-Excavation and Replacement:** The weak and compressible deposits below the trail could be over-excavated and replaced with compacted structural fill to eliminate the potential for future settlements. This could be feasible for walls in Segment 3, near the Lynnwood Transit Center, where excavations of 5 to 10 feet would likely be required. However, for the remaining walls subsurface investigations indicate that the base of the compressible soils varies from 11 to 15 feet below ground surface. Therefore, over-excavation and replacement would require deep excavations that would require shoring. Additionally, the groundwater level along the trail alignment is such that over-excavation and replacement would most likely require dewatering. Consideration could be given to the use of quarry spalls as backfill for the lower portion of fill, as the spalls could be placed in wet conditions (underwater) and would not require compaction.
- **Preloading:** Preloading is often a viable way to reduce future settlements and increase the shear strength of underlying compressible soils. Preloading involves placing a specified amount of soil or weight over a given area and allowing the weight to consolidate the

underlying compressible or weak soils prior to construction of the proposed improvements. Preloading has been used successfully on similar projects in the past. However, the viability of preloading requires time and space. We anticipate the peat soils would take several months to a year to consolidate sufficiently to reduce future settlements and increase the shear strength properties of the soil. We recommend additional borings be conducted to obtain Shelby tube samples of the peat soils and that laboratory consolidation testing be performed to estimate the duration of required preload and expected magnitude of settlements.

- **Deep Foundation Supported Structures:** Consideration could also be given to the use of small diameter pipe (pin) piles to support taller retaining walls. The foundations would need to extend below the soft deposits of peat and alluvium and bear in the advance outwash below. A grade beam would need to be constructed over the piles on which to construct the wall. Lightweight fill could then be used to raise grade.
- **Lightweight Backfill:** Lightweight materials could be used to reduce the load on the underlying compressible soils, reducing anticipated future settlements. This would be achieved by excavating existing fill soils and replacing them with lightweight materials. The depth of excavation would depend on the type of lightweight materials to be used and the anticipated loads. The new loads associated with the walls and grade changes (including the lightweight fill) would need to be less than the weight of soils excavated. The use of lightweight materials could be used to achieve the grade changes proposed.

Several lightweight fill materials are available and have been used on past projects with success. These materials include Geofam and lightweight cellular concrete (Cell-Crete). Geofam consists of proprietary lightweight Styrofoam blocks that are readily available to contractors and have been used successfully on numerous road projects. Geofam can be obtained in a variety of unit weights, typically 1 to 3 pcf. Lightweight cellular concrete is a proprietary product that can be manufactured onsite to a wide range of unit weights (36 to 120 pcf) and compressive strengths.

Lightweight fill could be designed to reduce anticipated future settlements. The facings of the light-weight fill will need to be protected and this can be achieved by various methods such as shotcrete or block walls (but these also add weight). The lightweight fill will need to be designed to resist potential buoyancy forces under the extreme high-water level. It is our understanding that the ground water level across the site is currently at 5 to 10 feet bgs with occasional perched water at the surface. Sufficient soil cover should be provided to ensure an adequate factor of safety for buoyancy.

4.5 BOARDWALK & BRIDGE FOUNDATION RECOMMENDATIONS

It is our understanding a fiber grate boardwalk and several bridges are proposed at various locations along the trail alignment and a Hollowcore boardwalk is proposed along the south side of 200th Street SW. Figures 2A through 2C show the locations of the bridges and boardwalks.

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To mitigate anticipated settlements due to the presence of soft, compressible soils we recommend these boardwalks and bridges be supported on small diameter pipe piles (pin piles). The piles will need to be galvanized due to the presence of peat soils.

4.5.1 Small Diameter Piles (Pin Piles)

Pin piles can be installed using a vibratory impact hammer operating on the boom of an excavator or articulating forklift. The pin piles are driven into the ground until they reach a 'refusal criteria' that varies with hammer weight and pile diameter and is typically provided by the pile driving contractor. It is our understanding that nominal 6-inch and 8-inch diameter, galvanized, Schedule 80 (extra strong), steel pipe piles will be used for all boardwalk and bridge sections. The pin piles must penetrate all existing fill, peat and alluvial soils and bear in the underlying dense advance outwash soils.

We anticipate that the pin piles will develop sufficient load-carrying capacity with about 10 feet of penetration into the dense advance outwash soils. Given the varying depths to the advance outwash deposit, different lengths of pile will be required. The fiber grate boardwalks and bridges in Segment 1, south of Wilcox Park, will require pile lengths of approximately 20 to 40 feet. The fiber grate boardwalks and bridge in Segment 3 near the Lynnwood Transit Center will require approximate pile lengths of 15 to 20 feet. We anticipate that the pin piles used to support the Hollowcore Boardwalk section along 200th Street SW will require approximate pile lengths of 20 to 30 feet. Figure 3 shows the allowable pile capacities for an 8-inch diameter pin pile at varying depths.

Each pin pile should be driven to "refusal," which is defined as a minimum penetration during a specified time period of driving (e.g., less than 1 inch of penetration during 60 seconds of driving). The driving criteria are determined based on the impact hammer used, pile size, site soil conditions, and load testing. Based on our experience and available design guidelines, 8-inch diameter pin piles driven to refusal will be capable of developing allowable axial compressive loads of 45 to 60 kips and 6-inch diameter pin piles driven to refusal will be capable of developing allowable axial compressive loads of 30 kips. We recommend load testing be performed on a minimum of 3% of the piles up to 5 piles maximum (1 minimum), to verify axial capacity and to establish an acceptable driving criterion. The test piles should be tested in accordance with the Quick Load Test Method described in test method ASTM D 1143-81, under the direction of a qualified geotechnical engineer. All pin piles should be driven under the observation of the geotechnical engineer.

It is possible that obstructions, possibly logs or large woody debris, which cannot be penetrated, may be encountered. In borings BH-1, BH-3, BH-11, and BH-13 pieces of wood or logs were encountered. If such an obstruction is encountered, the pin pile should be removed or abandoned in place, and a new pin pile should be installed at least 6 inches away. Alternatively, if sufficiently shallow, the obstruction in the location of the pile could be excavated and the pile re-

driven. If it is necessary to move a pile, the structural engineer should check and revise the boardwalk design and pile location as necessary.

Typically, the steel pipe piles will be delivered to the site in 21-foot (maximum) sections. If required, force-fit pin connections are typically used to splice sections together during installation. The uplift capacity of the pin piles should be neglected, unless the pile consists of a single section of pipe, or the connection is welded.

4.6 PAVEMENT DESIGN

4.6.1 New HMA Pavement Design

We understand that portions of the trail will be paved with Hot Mix Asphalt (HMA) and that the heaviest traffic will consist of infrequent maintenance vehicles. Table 4 provides our minimum HMA design recommendations.

Table 4. Structure Requirements for New HMA Pavement

Material Description	Minimum Layer Thickness (inches)	WSDOT Standard Specification
HMA	3	5-04
CSTC	6	9-03.9(3)

HMA: Hot Mix Asphalt
CSTC: Crushed Surfacing Top Course

We recommend that the asphaltic layers consist of HMA Class 3/8-inch. Recommendations are presented below for subgrade preparation and structural fill placement and compaction for pavement reconstruction.

The pavement will likely require periodic maintenance. Cracks larger than 1/4 -inch in width should be sealed periodically and some re-leveling/reconstruction maybe required due to settlement given the presence of peat soils below the pavement.

4.6.2 HMA Binder Selection

The selection of the optimum asphalt binder type for the prevailing climate is critical to ensure long-term pavement performance. Use of the wrong binder can result in low temperature cracking or permanent deformation at high temperatures.

Based on the climate in the project vicinity, we recommend Superpave Performance Grade binder PG 58S-22 be used.

4.6.3 Placement of HMA

Placement of HMA should be in accordance with Section 5-04 of the WSDOT Standard Specifications (WSDOT, 2020). Particular attention should be paid to the following:

- HMA should not be placed until the engineer has accepted the previously constructed pavement layers.
- HMA should not be placed on any frozen or wet surface.
- HMA should not be placed when precipitation is anticipated before the pavement can be compacted, or before any other weather conditions which could prevent proper handling and compaction of HMA.
- HMA should not be placed when the average surface temperatures are less than 45° F.
- HMA temperature behind the paver should be in excess of 240° F. Compaction should be completed before the mix temperature drops below 180° F. Comprehensive temperature records should be kept during the HMA placement.
- For cold joints, tack coat should be applied to the edge to be joined and the paver screed should be set to overlap the first mat by 1 to 2 inches.

4.6.4 Drainage

It is essential to the satisfactory performance of the pavement that good drainage is provided to prevent water ponding on or alongside or accumulating beneath. Water ponding can cause saturation of the pavement and subgrade layers and lead to premature failure. The base layers and subgrade surface should be graded to prevent water being trapped within the layer. The surface of the pavement should be sloped to convey water from the pavement to appropriate drainage facilities.

4.7 LUMINAIRE & SIGNAL POLE FOUNDATION RECOMMENDATIONS

We understand that project includes new luminaires and traffic signals. We recommend that all foundations extend below the peat soils and bear in the dense to very dense advance outwash soils in order to prevent settlement/tilting of the new poles. Table 17-2 of the *WSDOT Geotechnical Design Manual* (WSDOT, 2019), provides allowable lateral bearing pressures based on Standard Penetration Test (SPT) Resistance N-values (blows/foot). Table 5 summarizes the proposed design allowable lateral bearing pressures by depth for each borehole location.

Table 5. Recommended Allowable Lateral Bearing Pressure for Signal Pole Foundations

Relevant Boring	Depth (ft)	Average SPT N-Value in Depth Interval	Design Allowable Lateral Bearing Pressure (psf)
BH-1	0-30	0	0
BH-1	30+	20	3,500
BH-2	0-35	0	0
BH-2	35+	35	4,500
BH-3	0-15	0	0
BH-3	15+	25	4,200
BH-4	0-15	0	0
BH-4	15+	35	4,500
BH-5	0-30	0	0
BH-5	30+	20	3,500
BH-6	0-30	0	0
BH-6	30+	25	4,200
BH-7	0-15	0	0
BH-7	15+	35	4,500
BH-8	0-12	0	0
BH-8	12+	35	4,500
BH-9	0-20	0	0
BH-9	20+	35	4,500
BH-10	0-20	0	0

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BH-10	20+	35	4,500
BH-11	0-20	0	0
BH-11	20+	35	4,500
BH-12	0-15	0	0
BH-12	15+	35	4,500
BH-13	0-8	0	0
BH-13	8+	35	4,500
BH-14	0-10	10	1,500
BH-14	10+	35	4,500
BH-15	0-8	15	2,500
BH-15	8+	35	4,500
BH-16	0-5	0	0
BH-16	5+	15	2,500
BH-17	0-10	0	0
BH-17	10+	35	4,500
BH-18	0-10	0	0
BH-18	10+	30	3,500
BH-19	0-8	0	0
BH-19	8+	20	3,500

4.8 GENERAL EARTHWORK

4.8.1 Subgrade Preparation

Subgrade preparation is important to limit differential settlement of the proposed trail. Where possible and to depths feasible, soft and organic material should be removed from below the alignment prior to placement of fill. We recommend provisions be made to include the use of geogrid below any structural fill. This will help limit future distresses and provide better support for placing and compacting fill soils above. We recommend an HWA geotechnical engineer, or their representative, be present during construction to verify proper subgrade preparation is completed.

4.8.2 Structural Fill Material

Structural fill materials should consist of clean, free-draining, granular soils free from organic matter or other deleterious materials. Such materials should be less than 4 inches in maximum particle dimension, with less than 7 percent fines (portion passing the U. S. Standard No. 200 sieve), as specified for “Gravel Borrow” in Section 9-03.14(1) of the *WSDOT Standard Specifications* (WSDOT, 2020). The fine-grained portion of structural fill soils should be non-plastic. The native soils possess high fines content and will be moisture sensitive and difficult to place and compact during wet weather. Therefore, we do not recommend that the native soils be reused as structural fill.

4.8.3 Compaction

Structural fill soils should be moisture conditioned and compacted to the requirements specified in Section 2-03.3(14)C, Method C, of the *WSDOT Standard Specifications* (WSDOT, 2020); except the standard of compaction achieved should not be less than 95% of the maximum dry density (MDD) determined for the fill material by test method ASTM D 1557 (Modified Proctor). Structural fill should be placed and compacted in loose, horizontal lifts of not more than 8 inches in thickness. Subgrade compaction in areas under proposed trail pavement should conform to the requirements of Section 2-06.3(1) of the *WSDOT Standard Specifications* (WSDOT, 2020).

At the time of placement, the moisture content of structural fill should be at or near optimum. Achievement of proper density of a compacted fill depends on the size and type of compaction equipment, the number of passes, thickness of the layer being compacted, and soil moisture-density properties. In areas where limited space restricts the use of heavy equipment, smaller equipment can be used, but the soil must be placed in thin enough layers and at the proper moisture content to achieve the required relative compaction. Generally, loosely compacted soils result from poor construction technique and/or improper soil moisture content. Soils with high fines contents are particularly susceptible to becoming too wet and coarse-grained materials easily become too dry for proper compaction.

4.8.4 Wet Weather Earthwork

The onsite soils are considered to be highly moisture sensitive, and we do not recommend earthwork occur during wet weather. General recommendations relative to earthwork performed in wet weather or in wet conditions are presented below. These recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation of unsuitable and/or softened soil should be followed promptly by placement and compaction of clean structural fill. The size and type of construction equipment used may need to be limited to prevent soil disturbance.
- For wet weather conditions, the allowable fines content of the structural fill should be reduced to no more than 5 percent by weight of the portion of the fill material passing the 3/4-inch sieve. The fines should be non-plastic. The ground surface within the construction area should be graded to promote surface water run-off and to prevent ponding.
- Within the construction area, the ground surface should be sealed on completion of each shift by a smooth drum vibratory roller, or equivalent, and under no circumstances should soil be left uncompacted and exposed to moisture infiltration.
- Bales of straw and/or geotextile silt fences should be strategically located to control erosion and the movement of soil.

4.8.5 Temporary Excavations

Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. In accordance with Part N of Washington Administrative Code (WAC) 296-155, all temporary cuts in excess of 4 feet in height must be either sloped or shored prior to entry by personnel. The existing fill soils are generally classified as Type C soils per WAC 296-155. Where shoring is not used, temporary cuts in Type C soils should be sloped no steeper than 1.5H:1V (horizontal: vertical). The recommended maximum slope is applicable to temporary excavations above the water table only; flatter side slopes would be required for excavations below the water table.

The contractor should monitor the stability of the temporary excavations and adjust the construction schedule and slope inclination accordingly. The contractor should be responsible for control of ground and surface water and should employ sloping, slope protection, ditching, sumps, dewatering, and other measures, as necessary, to prevent sloughing of soils.

5. CONDITIONS AND LIMITATIONS

We have prepared this report for the City of Lynnwood and Parametrix for use in design of this project. The conclusions and interpretations presented in this report should not be construed as

our warranty of subsurface conditions at the site. Experience has shown that soil and ground water conditions can vary significantly over small distances and with time. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study of this scope and nature. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HWA should be notified for review of the recommendations of this report, and revision of such if necessary. If there is a substantial lapse of time between submission of this report and the start of construction, or if conditions change due to construction operations, it is recommended that this report be reviewed to determine the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

Within the limitations of approved scope, schedule and budget, HWA attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology at the time the report was prepared. No warranty, express or implied, is made.

HWA does not practice or consult in the field of safety engineering. We do not direct the contractor's operations and cannot be responsible for the safety of personnel other than our own on the site. As such, the safety of others is the responsibility of the contractor. However, the contractor should notify the owner if any of the recommended actions presented herein are considered unsafe.



We appreciate the opportunity to provide geotechnical services for this project. Should you have any questions, or if we may be of further service, please call.

Sincerely,

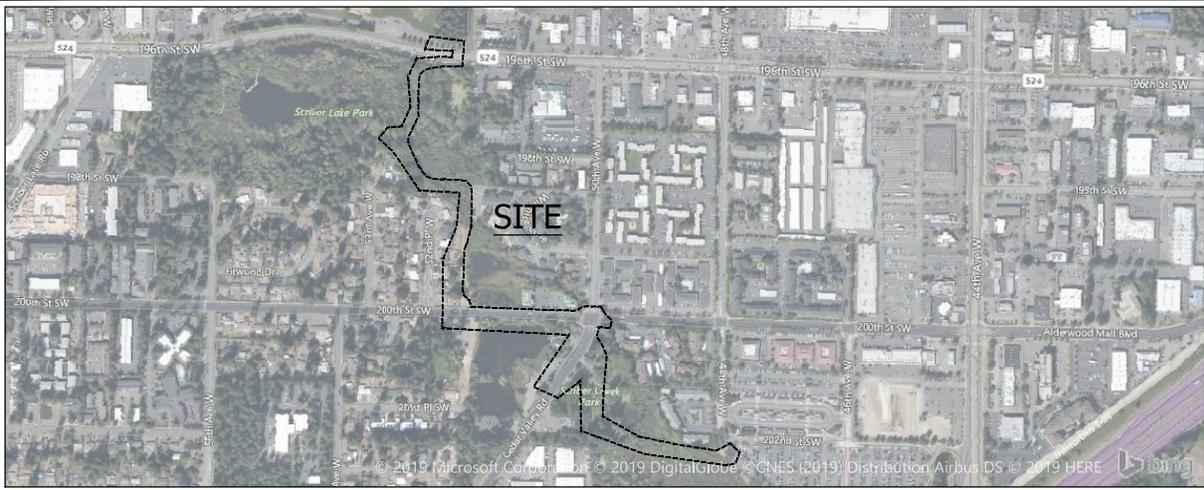
HWA GEOSCIENCES INC.

Bryan Hawkins, P.E.
Senior Geotechnical Engineer

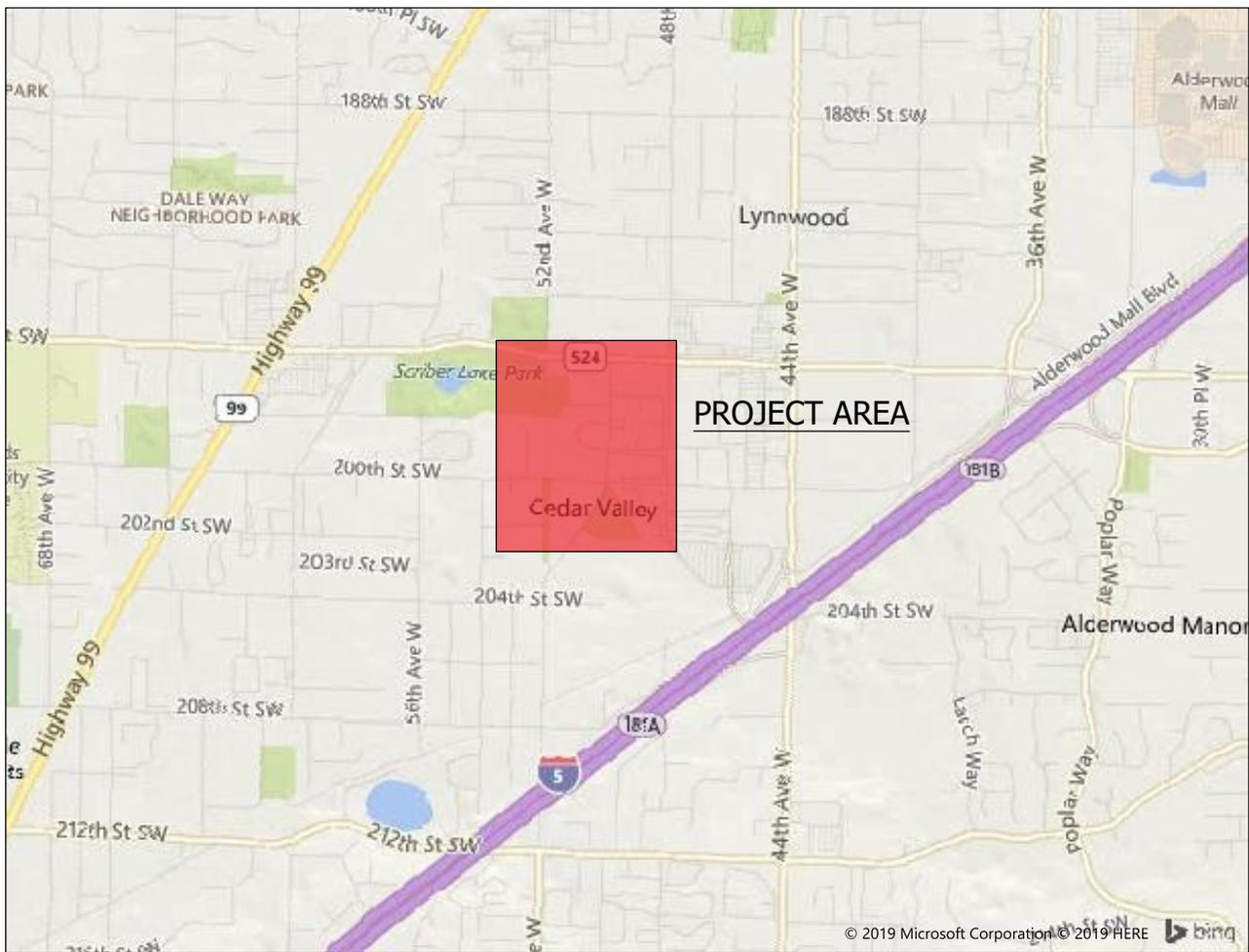
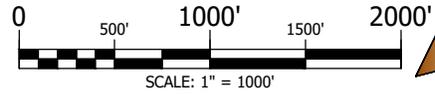
Michael Place, P.E.
Geotechnical Engineer

6. REFERENCES

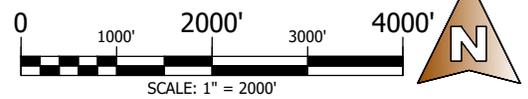
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SITE MAP



VICINITY MAP



SITE AND VICINITY MAP

**SCRIBER CREEK TRAIL
LYNNWOOD, WASHINGTON**

FIGURE NO.:

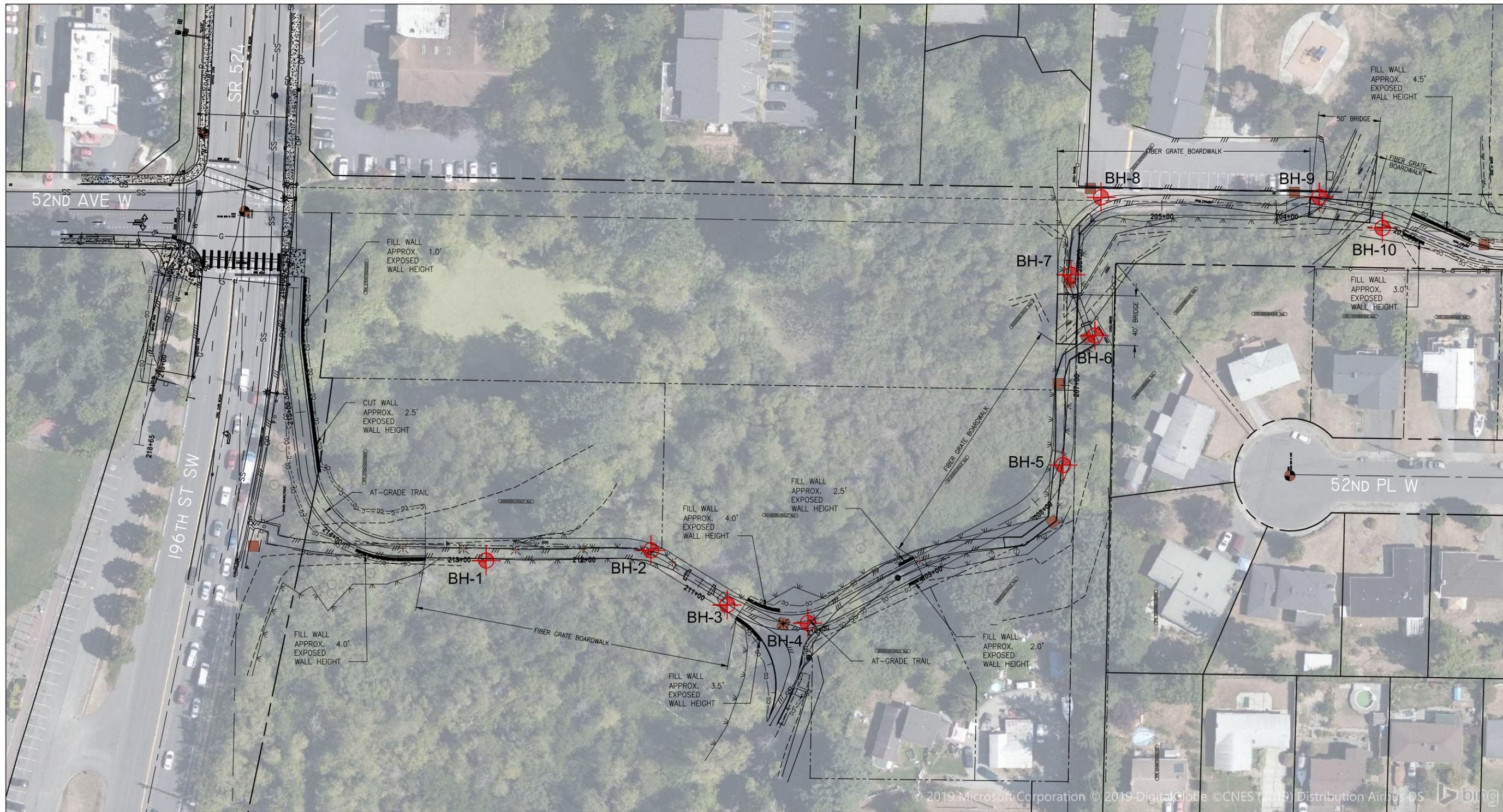
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DRAWN BY: CHECK BY:
CF BH

PROJECT #
2018-102-21



GEOSCIENCES INC.
DBE/MWBE



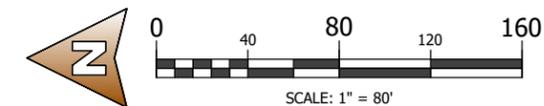
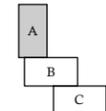
MATCHLINE SEE 2B

SCRIBER CREEK TRAIL
Scale: 1" = 80'-0"

EXPLORATION LEGEND

BH-1 BOREHOLE DESIGNATION AND APPROXIMATE LOCATION

KEY MAP



BASE MAP PROVIDED BY: BING AND SURVEYOR

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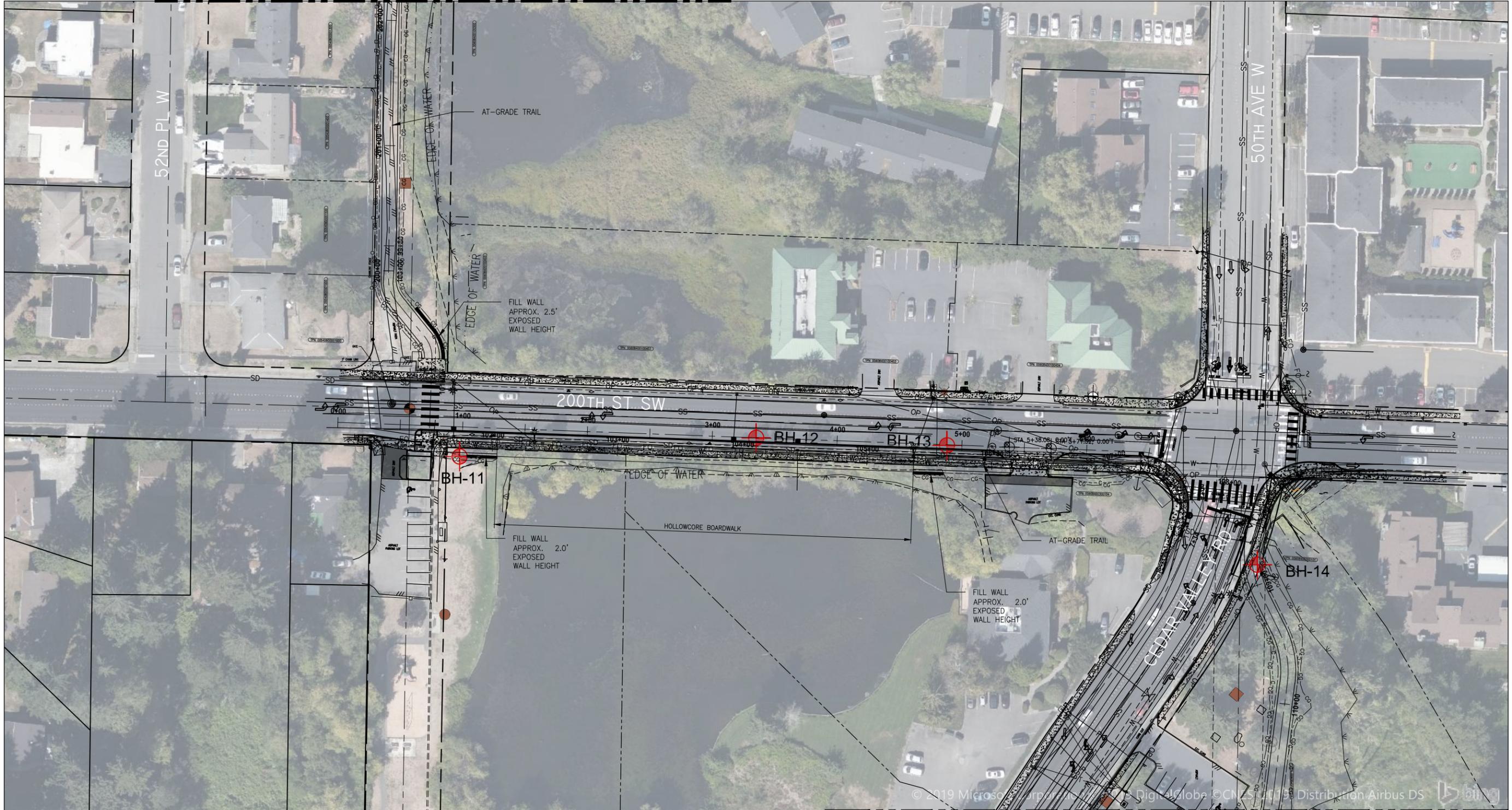
HWA | **GEOSCIENCES INC.**
DBE/MWBE

SCRIBER CREEK TRAIL
LYNNWOOD, WASHINGTON

SITE &
EXPLORATION PLAN

DRAWN BY:	FIGURE NO.:
CF	2A
CHECK BY:	PROJECT NO.:
BH	2018-102-21

MATCHLINE SEE 2A



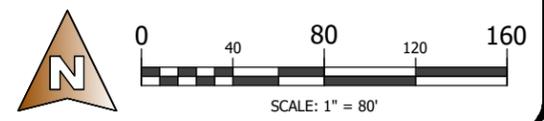
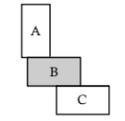
MATCHLINE SEE 2C

SCRIBER CREEK TRAIL
Scale: 1" = 80'-0"

EXPLORATION LEGEND

BH-1 BOREHOLE DESIGNATION AND APPROXIMATE LOCATION

KEY MAP

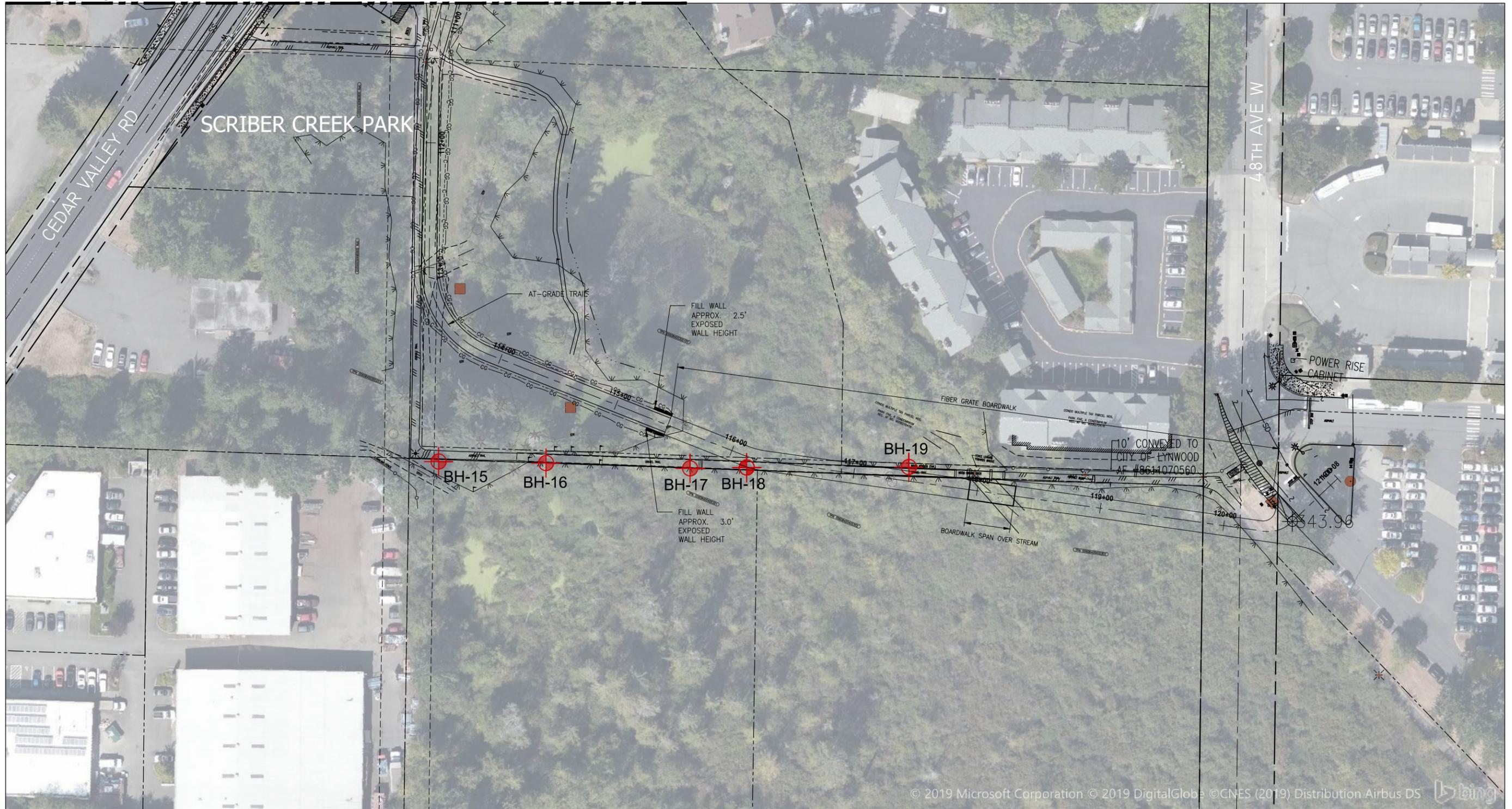


SCRIBER CREEK TRAIL
LYNNWOOD, WASHINGTON

SITE &
EXPLORATION PLAN

DRAWN BY:	FIGURE NO.:
CF	2B
CHECK BY:	PROJECT NO.:
BH	2018-102-21

MATCHLINE SEE 2B

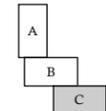


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EXPLORATION LEGEND

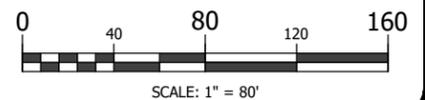
BH-1 BOREHOLE DESIGNATION AND APPROXIMATE LOCATION

KEY MAP



SCRIBER CREEK TRAIL

Scale: 1" = 80'-0"



GEOSCIENCES INC.
DBE/MWBE

**SCRIBER CREEK TRAIL
LYNNWOOD, WASHINGTON**

**SITE &
EXPLORATION PLAN**

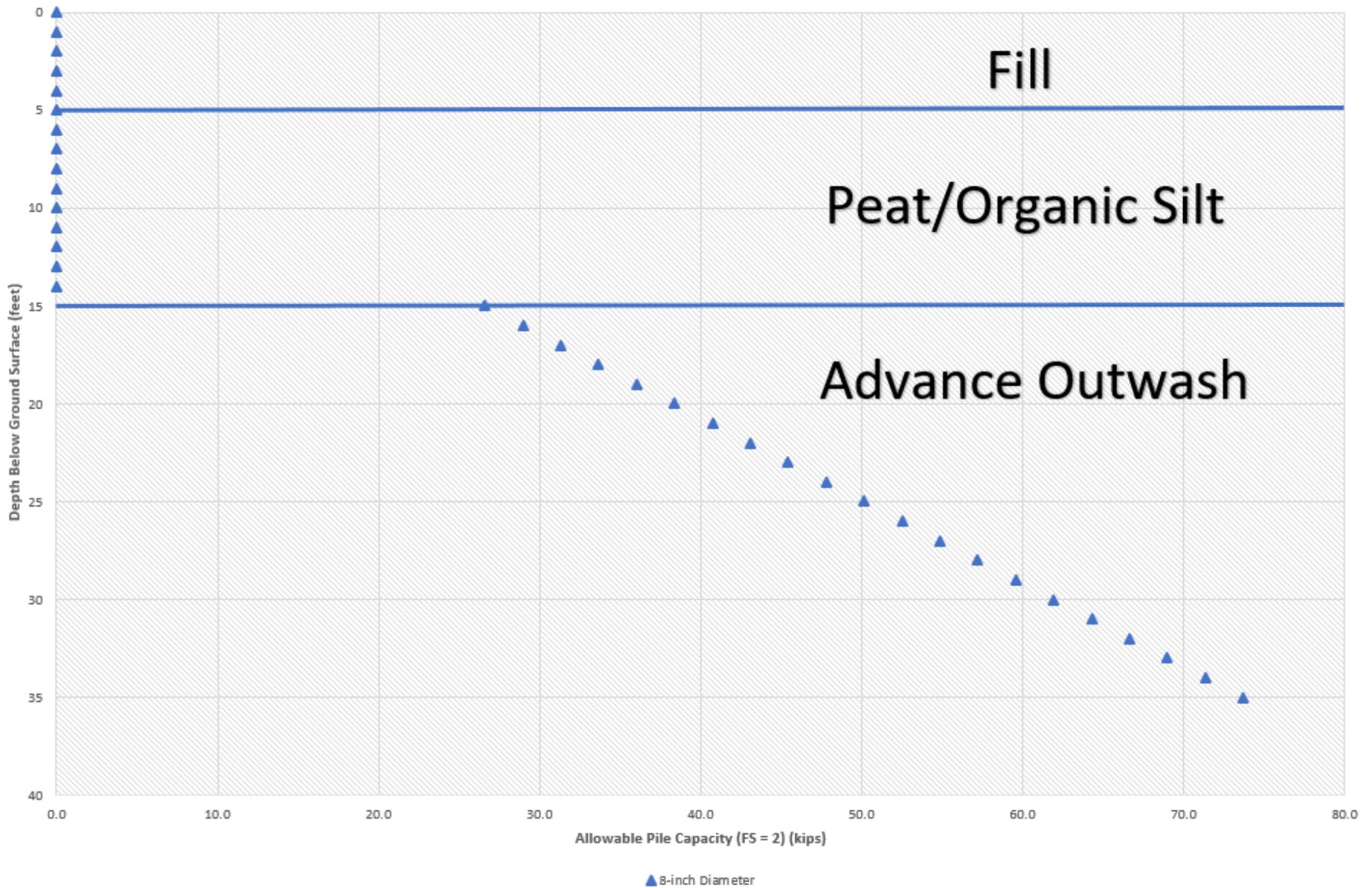
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CHECK BY:
BH

FIGURE NO.:
2C
PROJECT NO.:
2018-102-21

BASE MAP PROVIDED BY: BING AND SURVEYOR

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Closed-Ended Pipe Pile Capacity vs Depth @ BH-12 Location



ALLOWABLE PILE CAPACITIES

SCRIBER CREEK TRAIL
LYNNWOOD, WASHINGTON

FIGURE NO.

3

PROJECT NO.

2018-102-21

APPENDIX A
FIELD EXPLORATIONS

DRAFT

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

COHESIONLESS SOILS			COHESIVE SOILS		
Density	N (blows/ft)	Approximate Relative Density(%)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	0 - 15	Very Soft	0 to 2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	35 - 65	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	85 - 100	Very Stiff Hard	15 to 30 over 30	2000 - 4000 >4000

TEST SYMBOLS

%F	Percent Fines
AL	Atterberg Limits: PL = Plastic Limit LL = Liquid Limit
CBR	California Bearing Ratio
CN	Consolidation
DD	Dry Density (pcf)
DS	Direct Shear
GS	Grain Size Distribution
K	Permeability
MD	Moisture/Density Relationship (Proctor)
MR	Resilient Modulus
PID	Photoionization Device Reading
PP	Pocket Penetrometer Approx. Compressive Strength (tsf)
SG	Specific Gravity
TC	Triaxial Compression
TV	Torvane Approx. Shear Strength (tsf)
UC	Unconfined Compression

USCS SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP DESCRIPTIONS		
Coarse Grained Soils	Gravel and Gravelly Soils	Clean Gravel (little or no fines)		GW Well-graded GRAVEL	
		Gravel with Fines (appreciable amount of fines)		GP Poorly-graded GRAVEL	
	More than 50% Retained on No. 4 Sieve	Sand and Sandy Soils	Clean Sand (little or no fines)		SW Well-graded SAND
			Sand with Fines (appreciable amount of fines)		SP Poorly-graded SAND
Fine Grained Soils	Silt and Clay	Liquid Limit Less than 50%		ML SILT	
		Liquid Limit 50% or More		CL Lean CLAY	
	50% or More Passing No. 200 Sieve Size	Silt and Clay	Liquid Limit Less than 50%		MH Elastic SILT
			Liquid Limit 50% or More		CH Fat CLAY
Highly Organic Soils			OH Organic SILT/Organic CLAY		
				PT PEAT	

SAMPLE TYPE SYMBOLS

	2.0" OD Split Spoon (SPT) (140 lb. hammer with 30 in. drop)
	Shelby Tube
	3-1/4" OD Split Spoon with Brass Rings
	Small Bag Sample
	Large Bag (Bulk) Sample
	Core Run
	Non-standard Penetration Test (3.0" OD split spoon)

GROUNDWATER SYMBOLS

	Groundwater Level (measured at time of drilling)
	Groundwater Level (measured in well or open hole after water level stabilized)

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5 mm) to No. 200 (0.074 mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

COMPONENT PROPORTIONS

PROPORTION RANGE	DESCRIPTIVE TERMS
< 5%	Clean
5 - 12%	Slightly (Clayey, Silty, Sandy)
12 - 30%	Clayey, Silty, Sandy, Gravelly
30 - 50%	Very (Clayey, Silty, Sandy, Gravelly)
Components are arranged in order of increasing quantities.	

NOTES: Soil classifications presented on exploration logs are based on visual and laboratory observation. Soil descriptions are presented in the following general order:

Density/consistency, color, modifier (if any) GROUP NAME, additions to group name (if any), moisture content. Proportion, gradation, and angularity of constituents, additional comments. (GEOLOGIC INTERPRETATION)

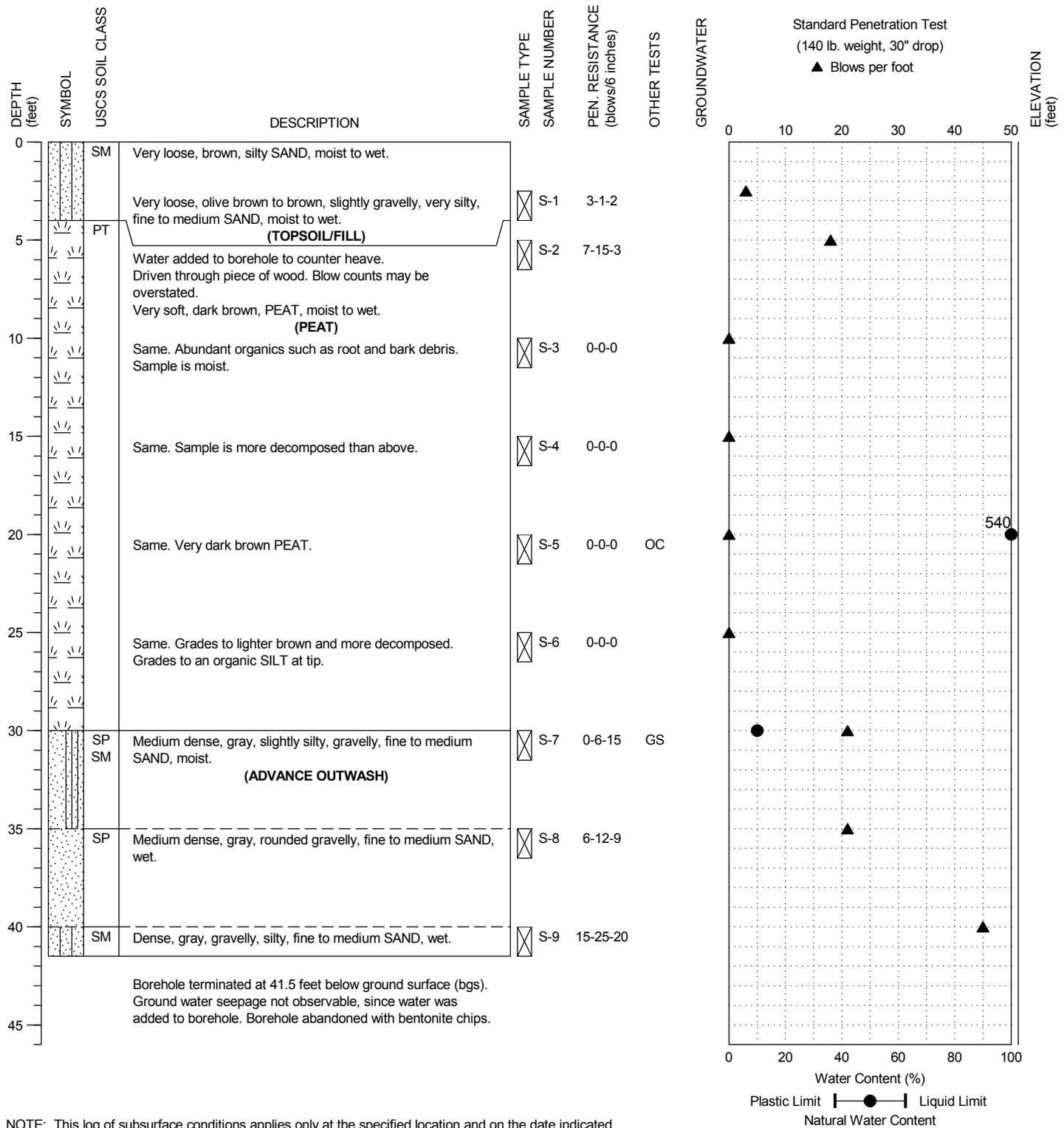
Please refer to the discussion in the report text as well as the exploration logs for a more complete description of subsurface conditions.

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
MOIST	Damp but no visible water.
WET	Visible free water, usually soil is below water table.

DRILLING COMPANY: Geologic Drill Partners Inc.
 DRILLING METHOD: HSA with Bobcat Mini Drill Rig
 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/10/2019
 DATE COMPLETED: 7/10/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



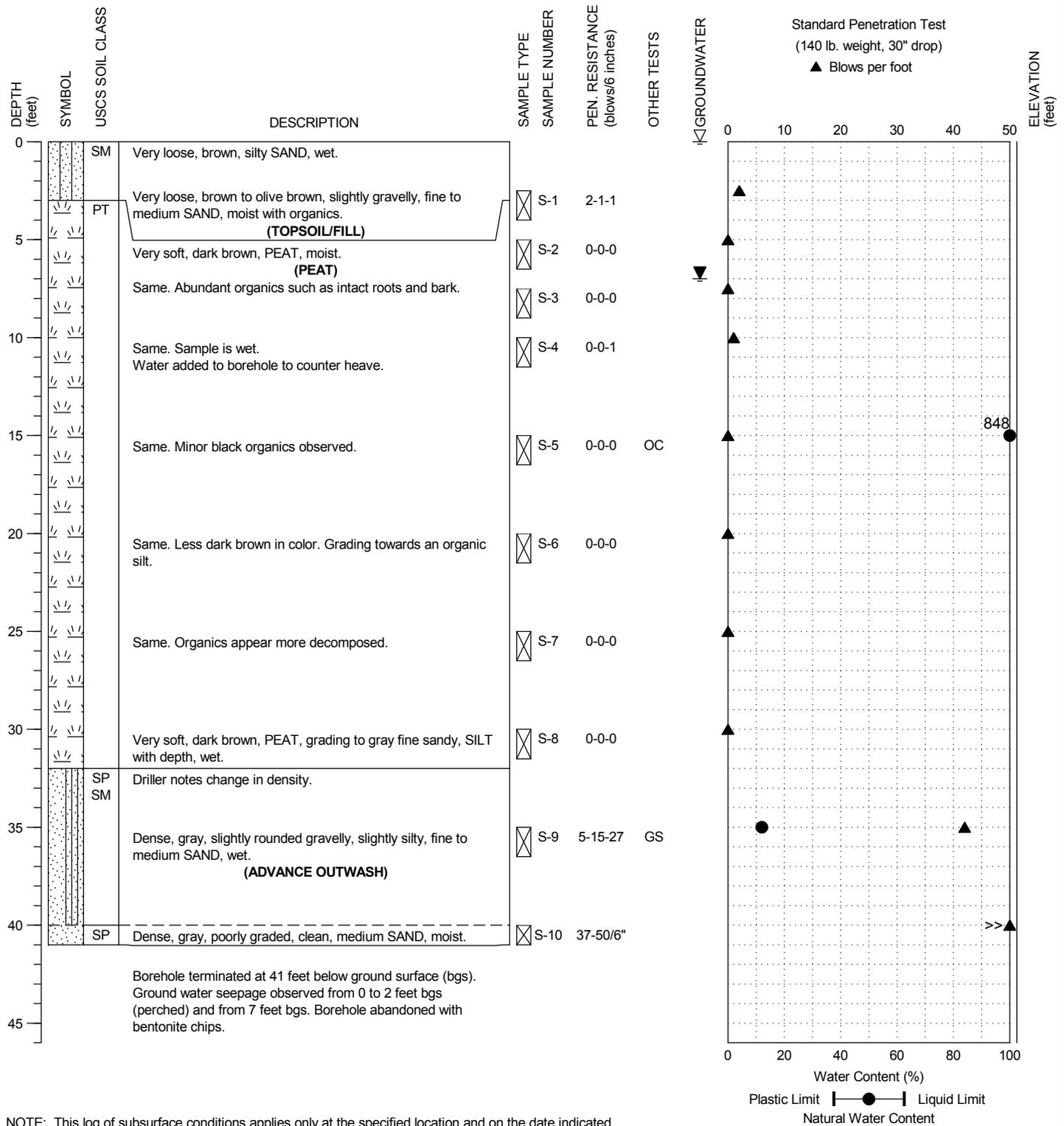
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-01

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/10/2019
 DATE COMPLETED: 7/10/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



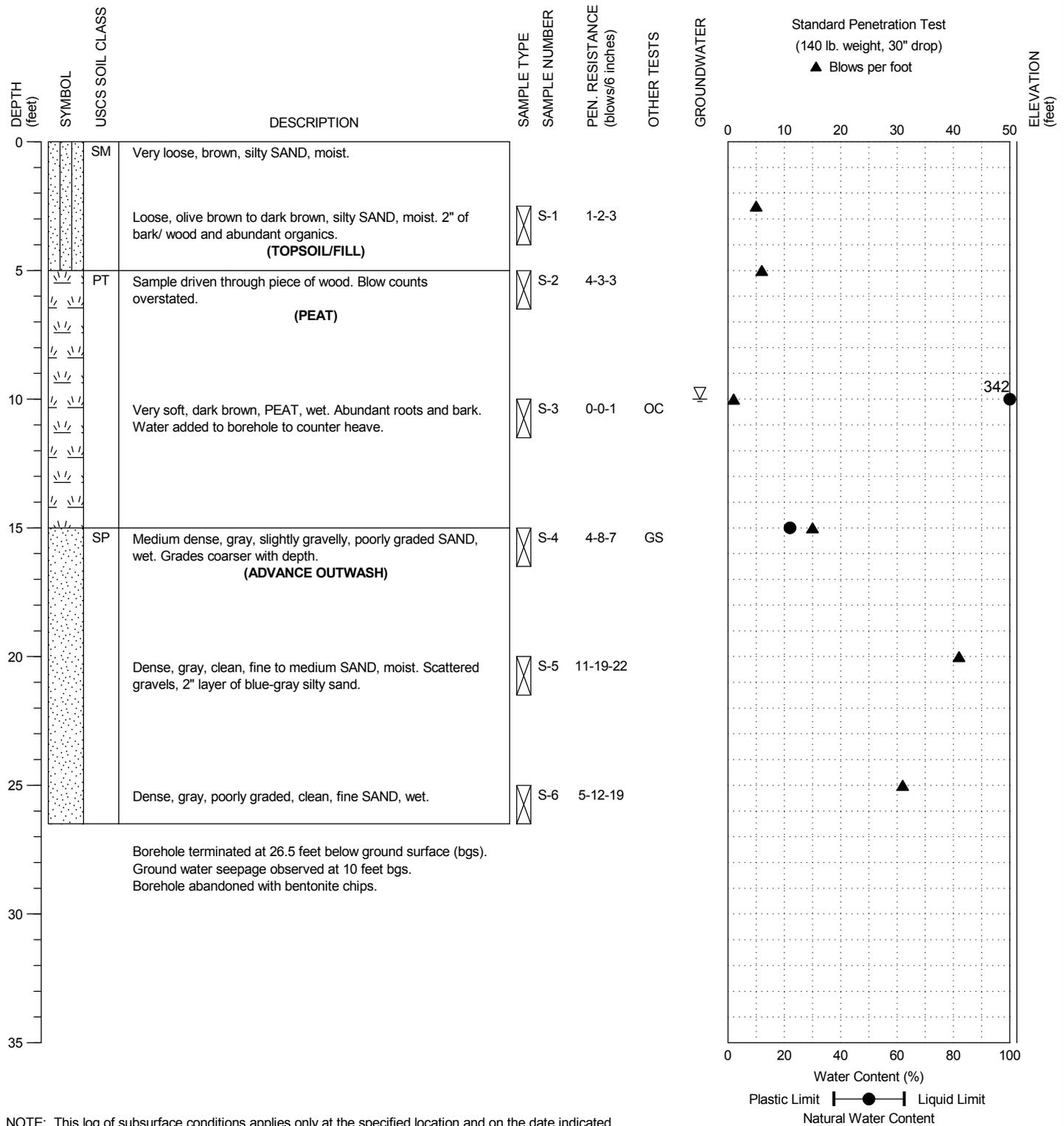
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BORING:
 BH-02

PAGE: 1 of 1

DRILLING COMPANY: Geologic Drill Partners Inc.
 DRILLING METHOD: HSA with Bobcat Mini Drill Rig
 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/3/2019
 DATE COMPLETED: 7/3/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



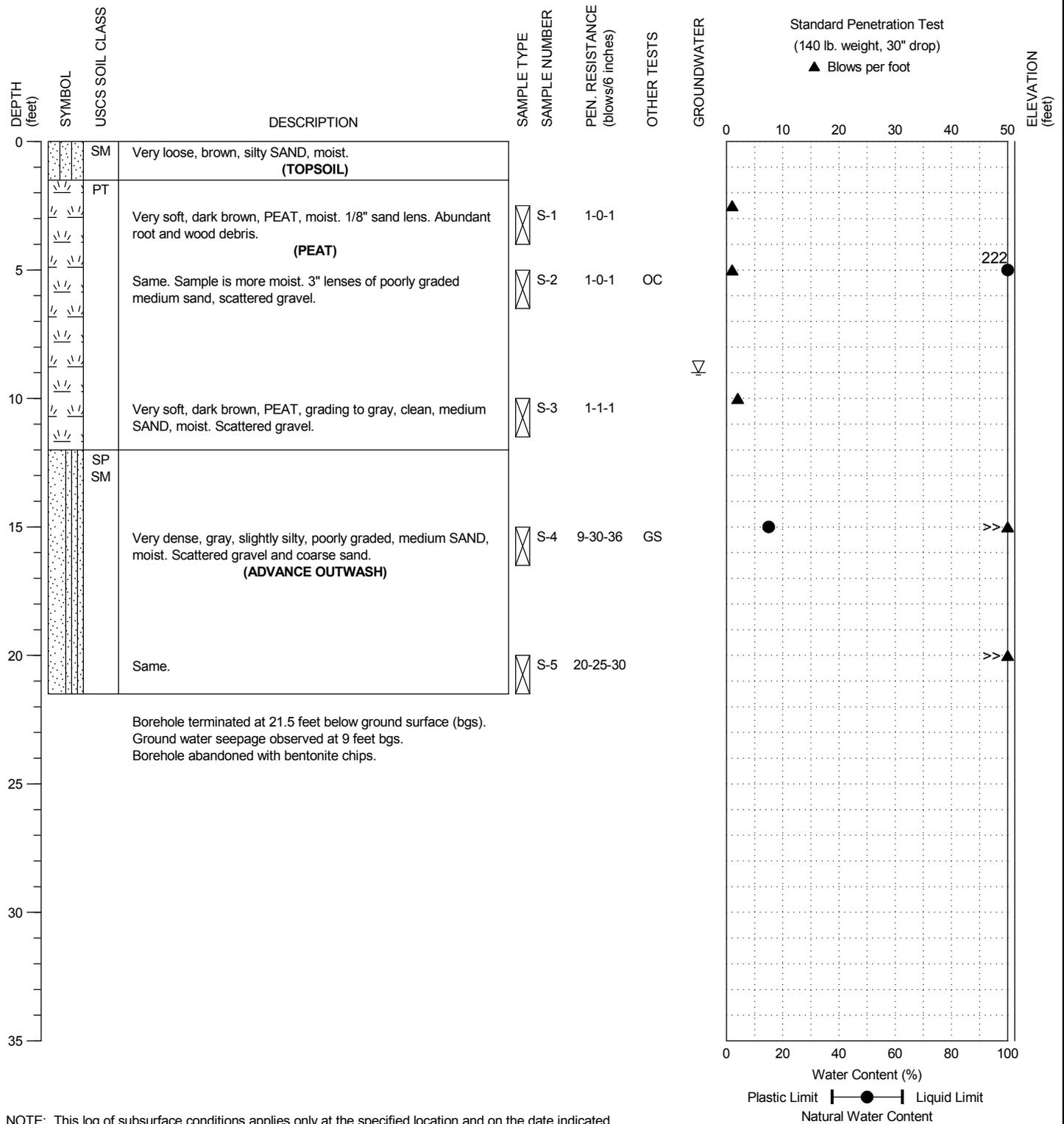
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PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/3/2019
 DATE COMPLETED: 7/3/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



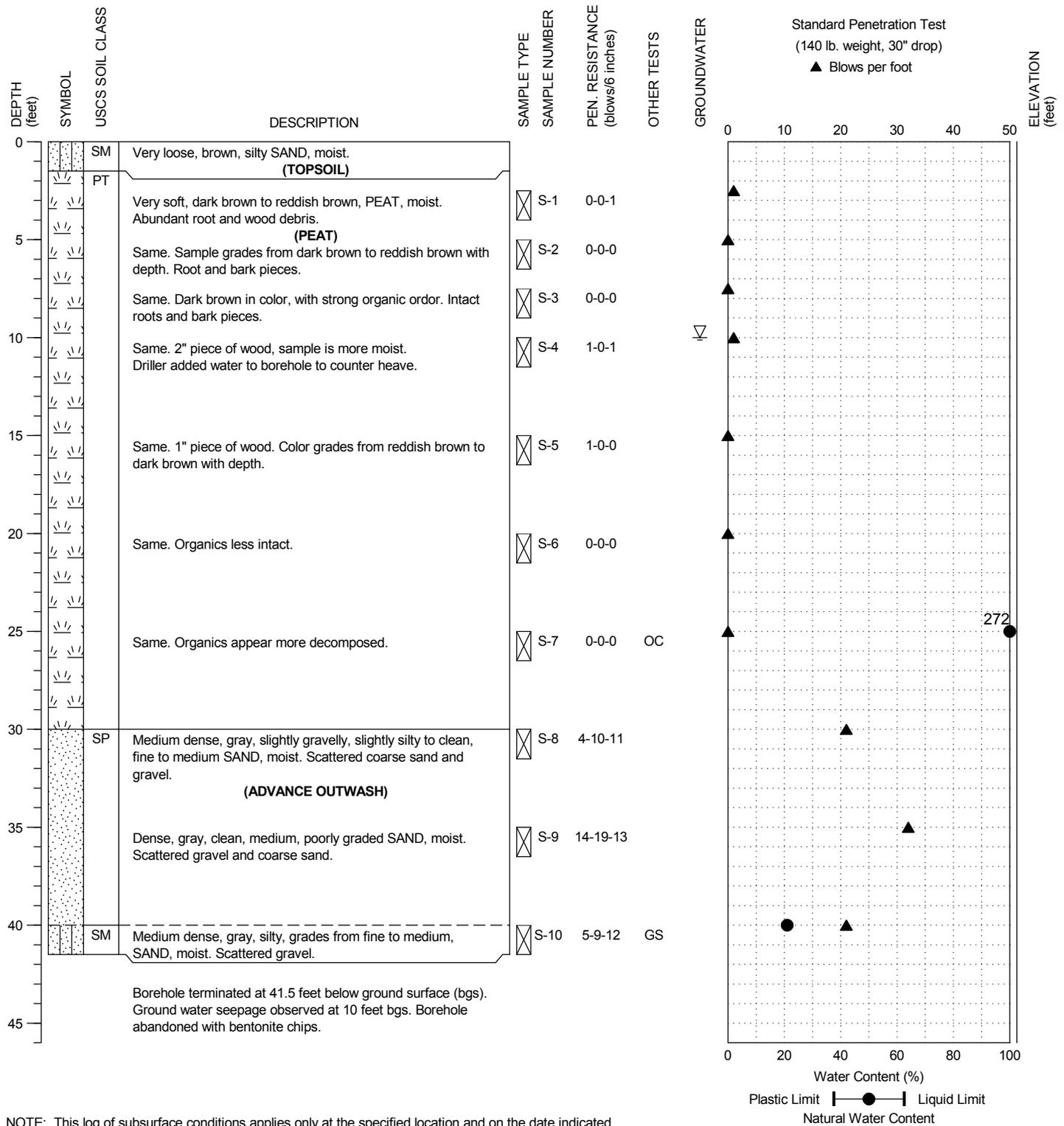
Scriber Creek Trail
 Lynnwood, Washington

BORING:
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PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/3/2019
 DATE COMPLETED: 7/3/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



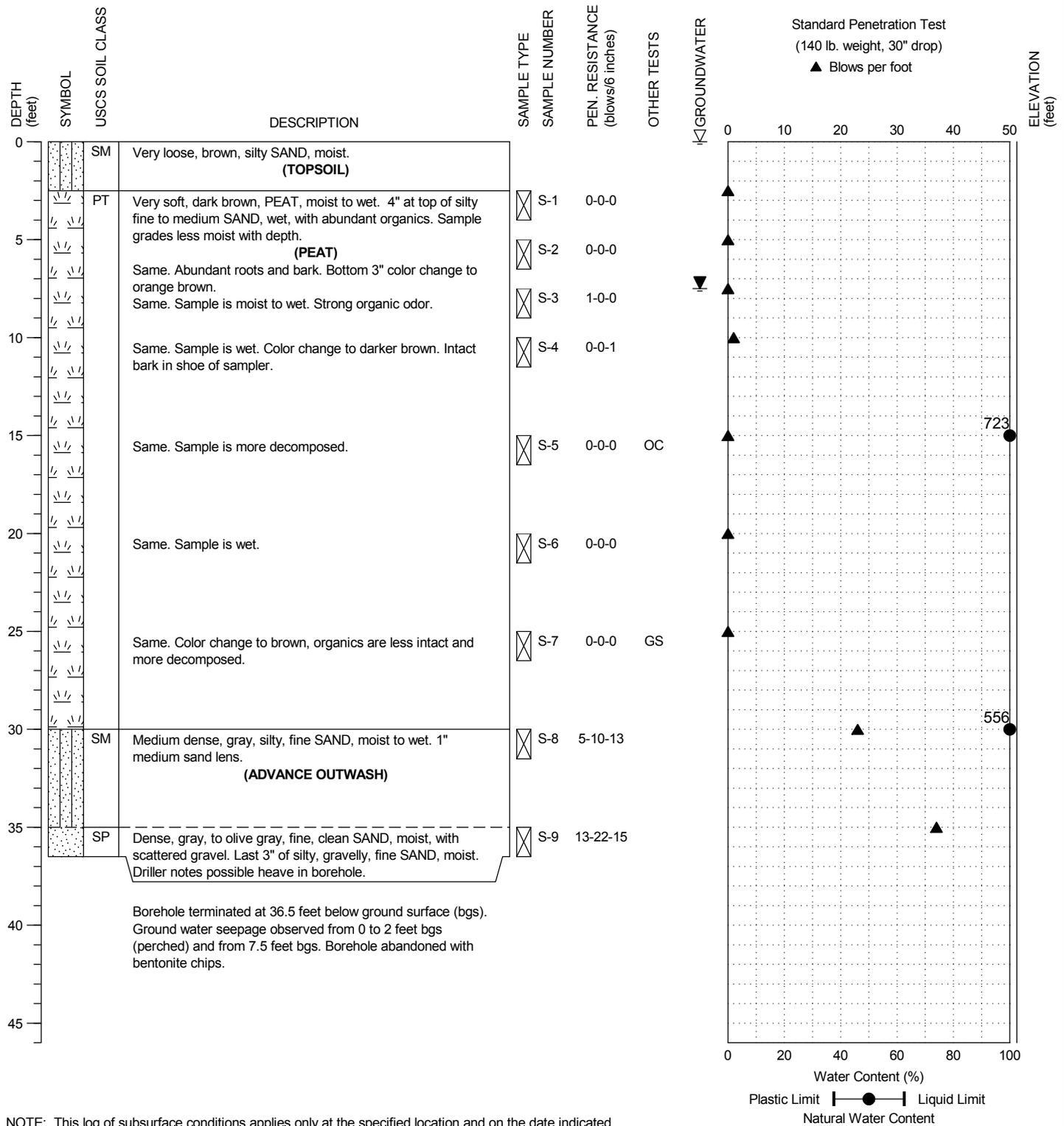
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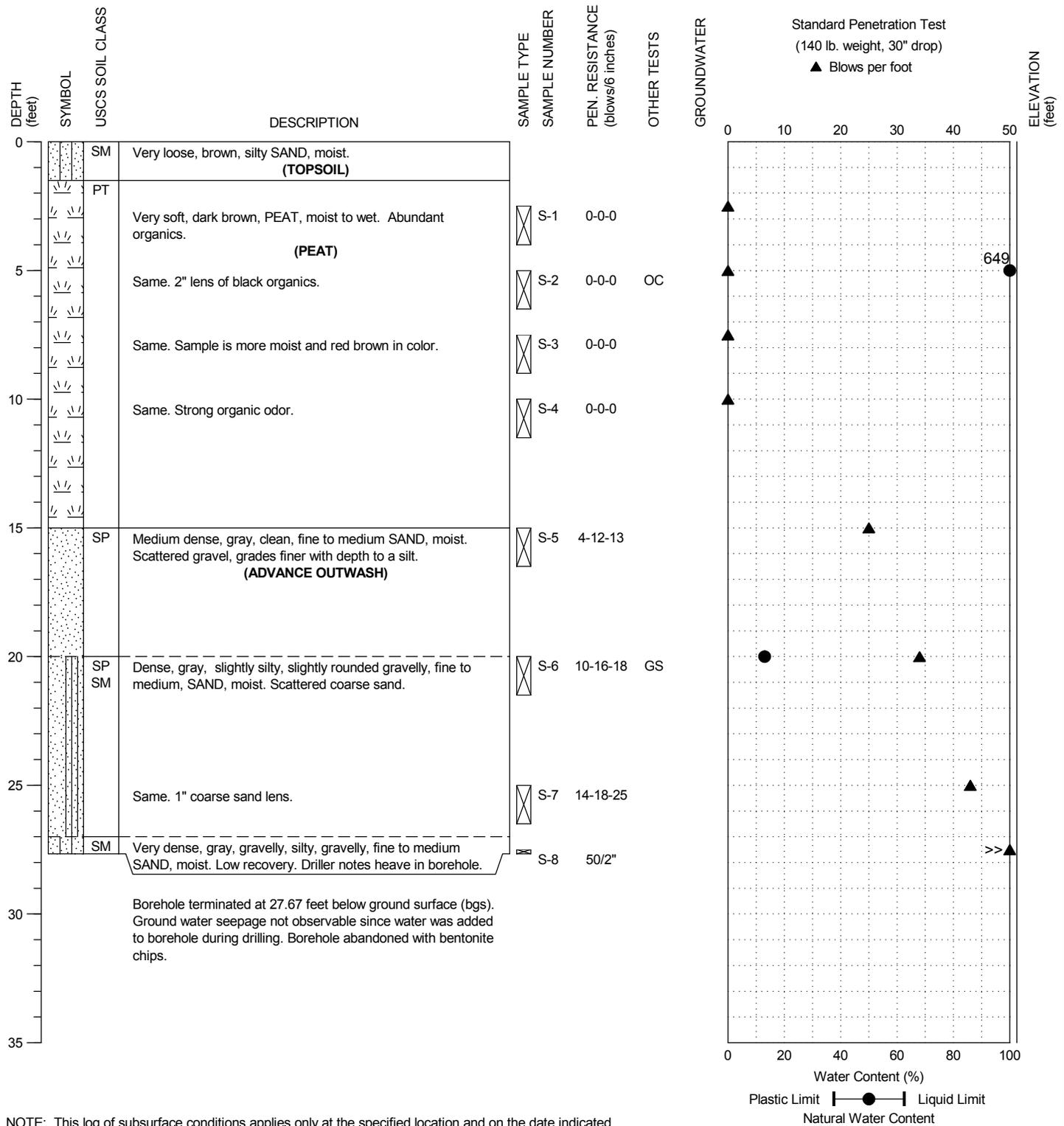
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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/2/2019
 DATE COMPLETED: 7/2/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



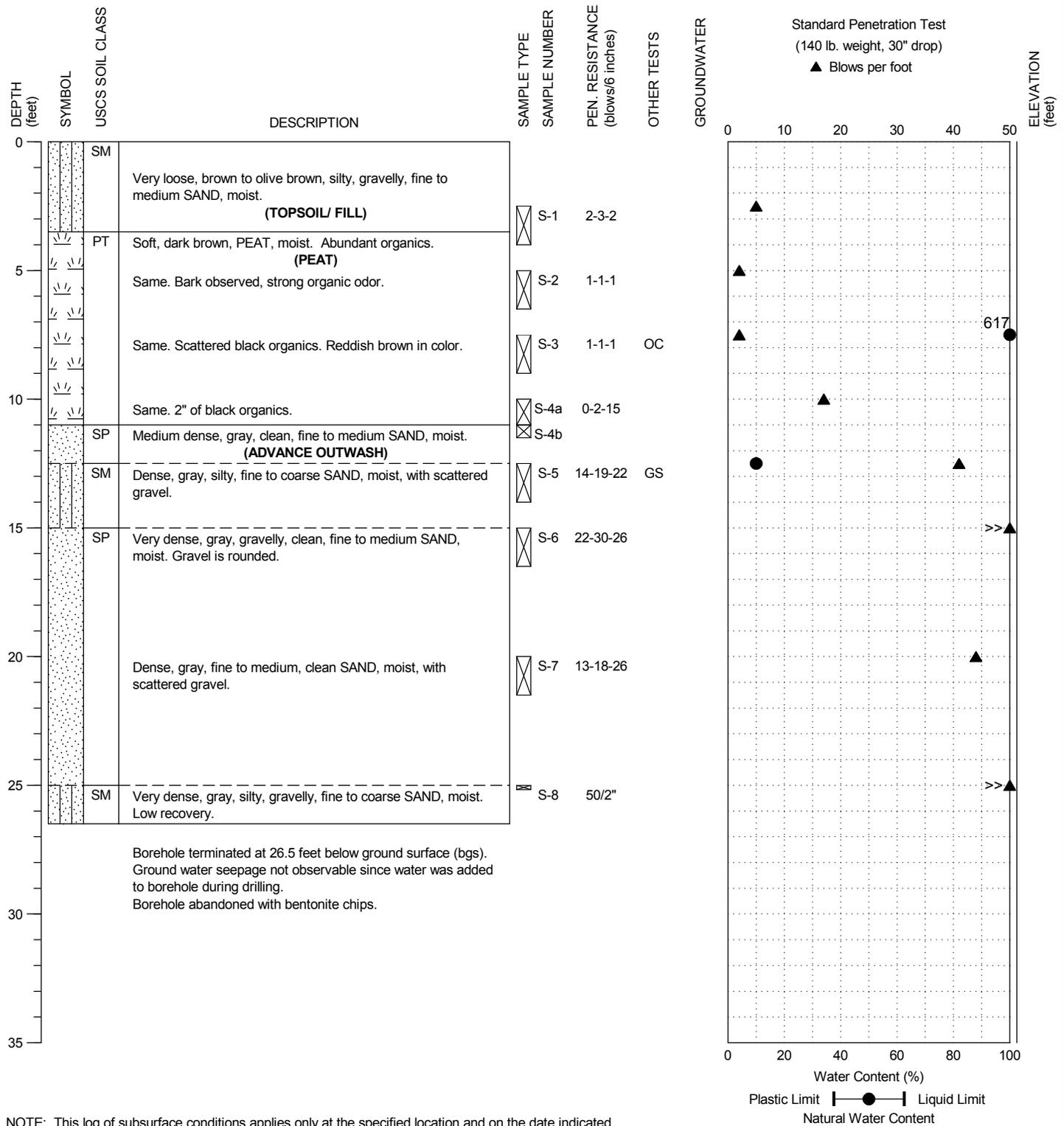
Scriber Creek Trail
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BORING:
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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/2/2019
 DATE COMPLETED: 7/2/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



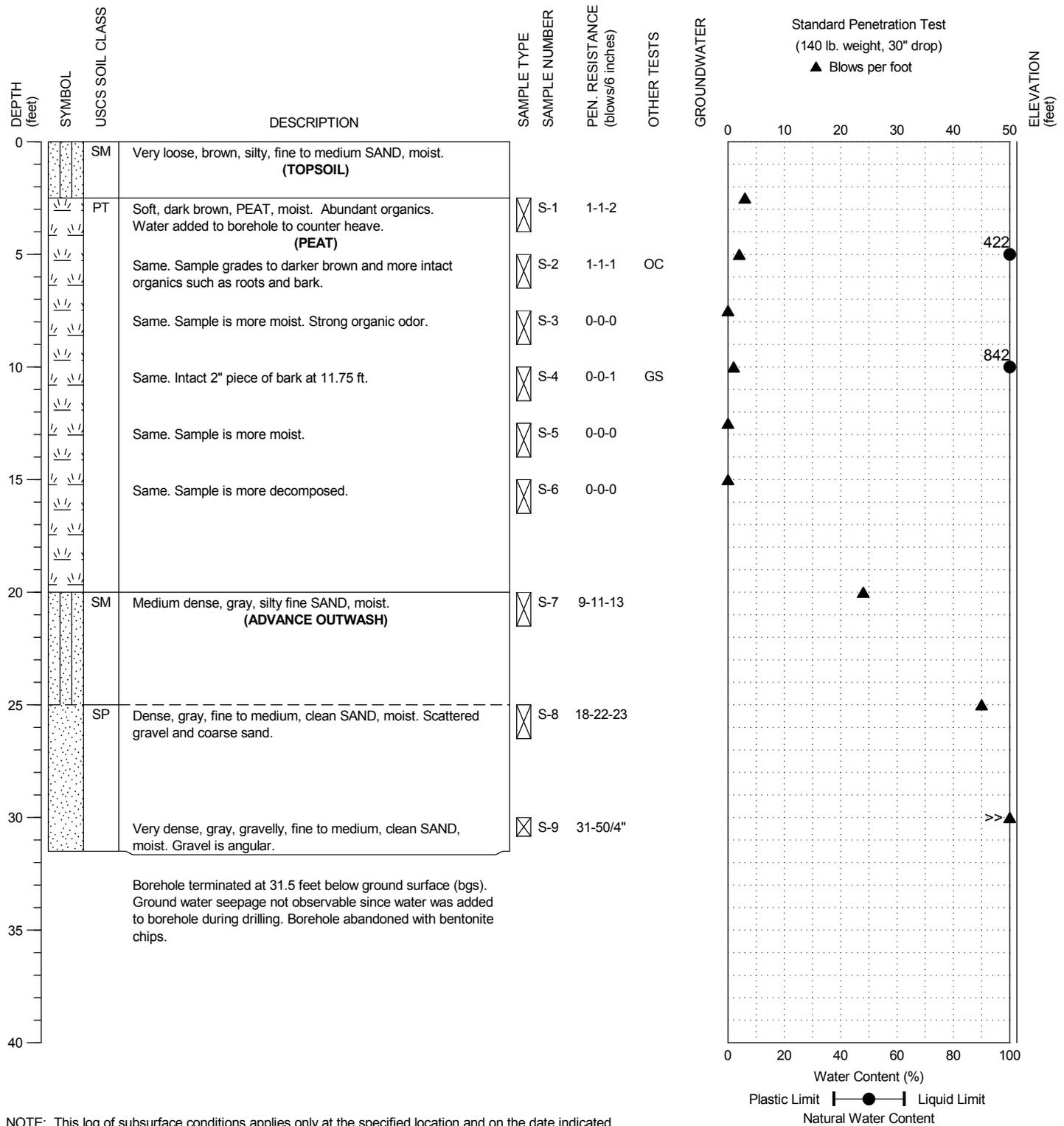
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 Lynnwood, Washington

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PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/2/2019
 DATE COMPLETED: 7/2/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



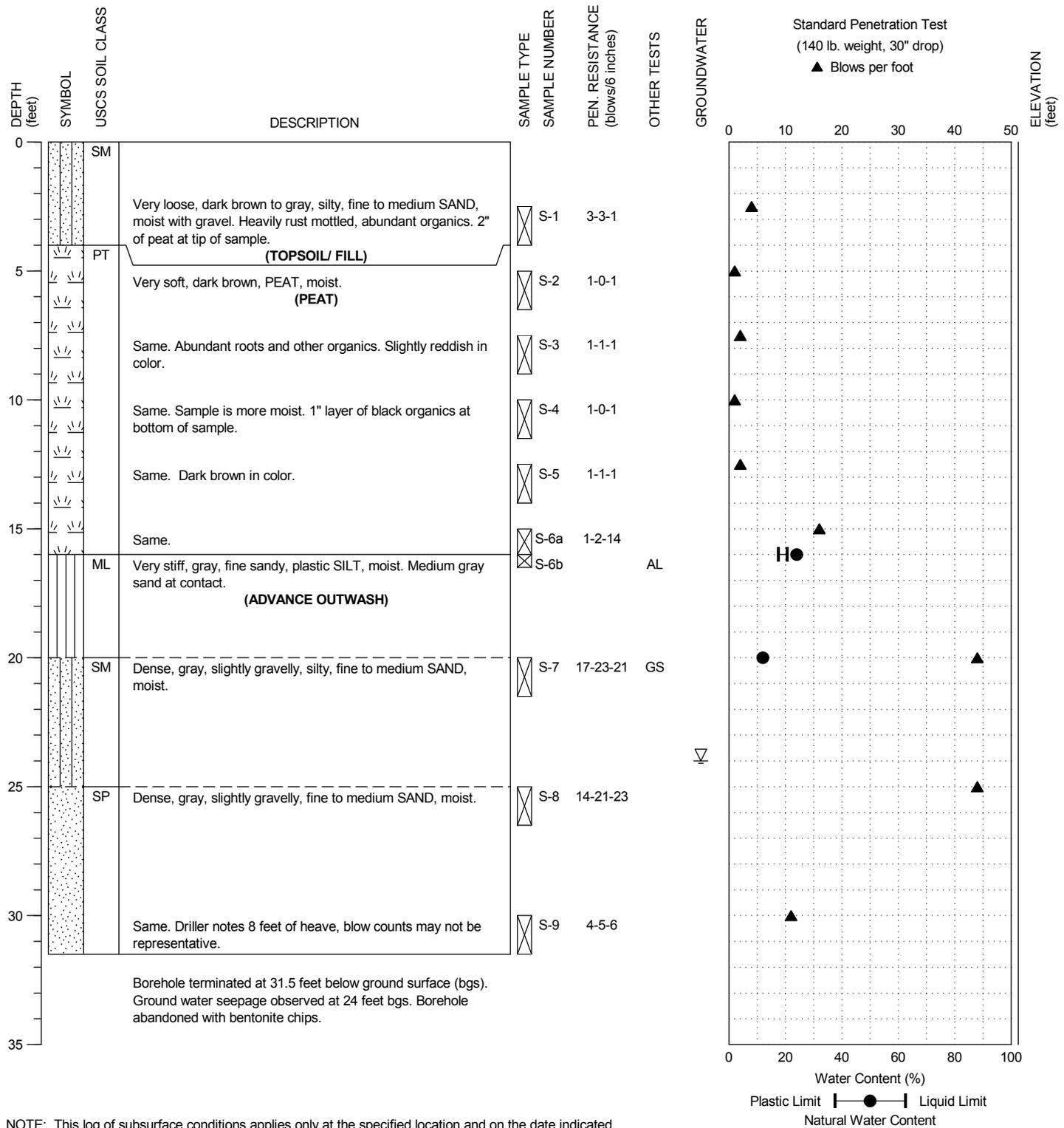
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-09

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2A

DATE STARTED: 7/2/2019
 DATE COMPLETED: 7/2/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



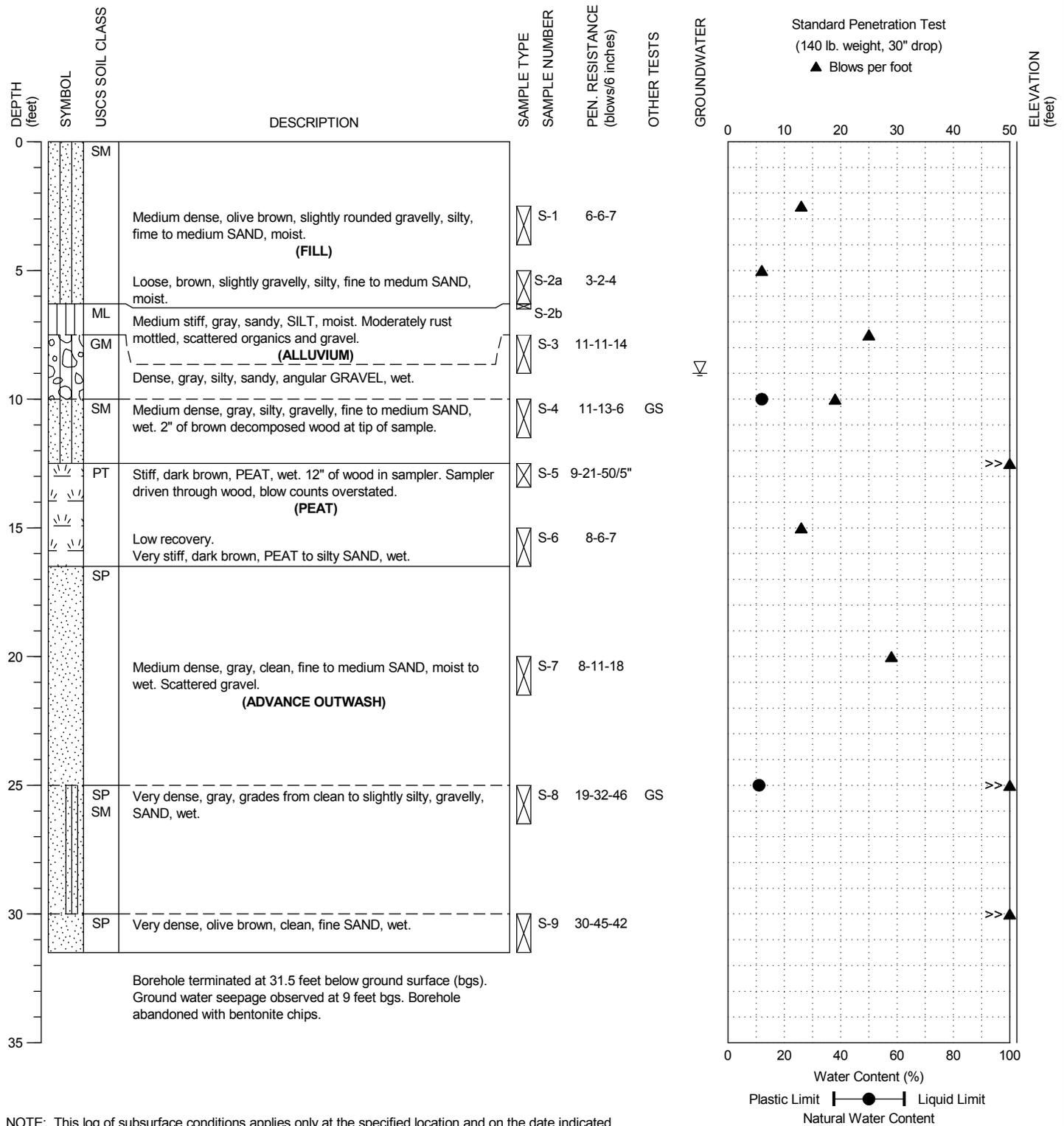
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-10

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2B

DATE STARTED: 7/1/2019
 DATE COMPLETED: 7/1/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



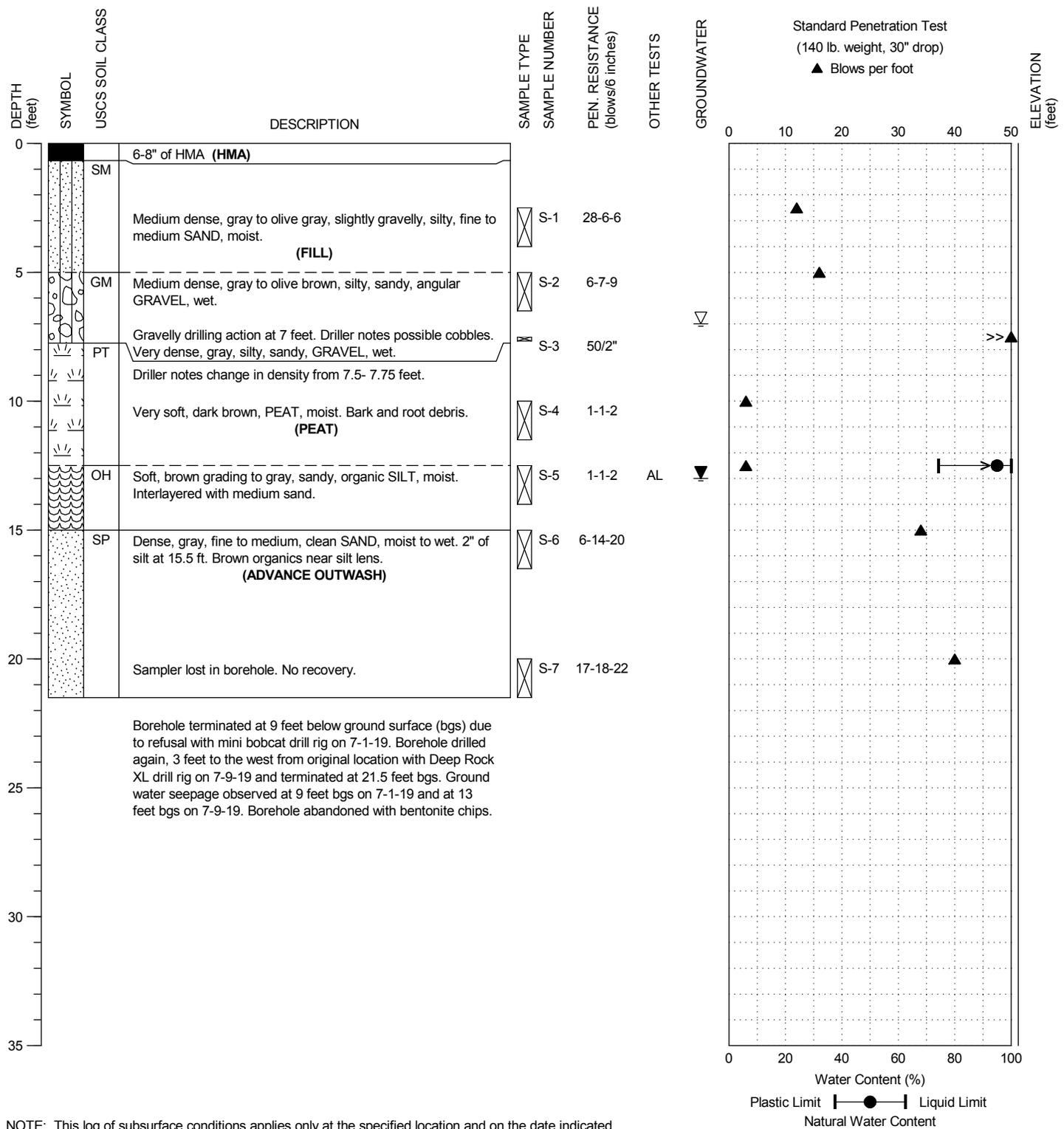
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BORING:
 BH-11

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2B

DATE STARTED: 7/9/2019
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 LOGGED BY: S. Khandaker



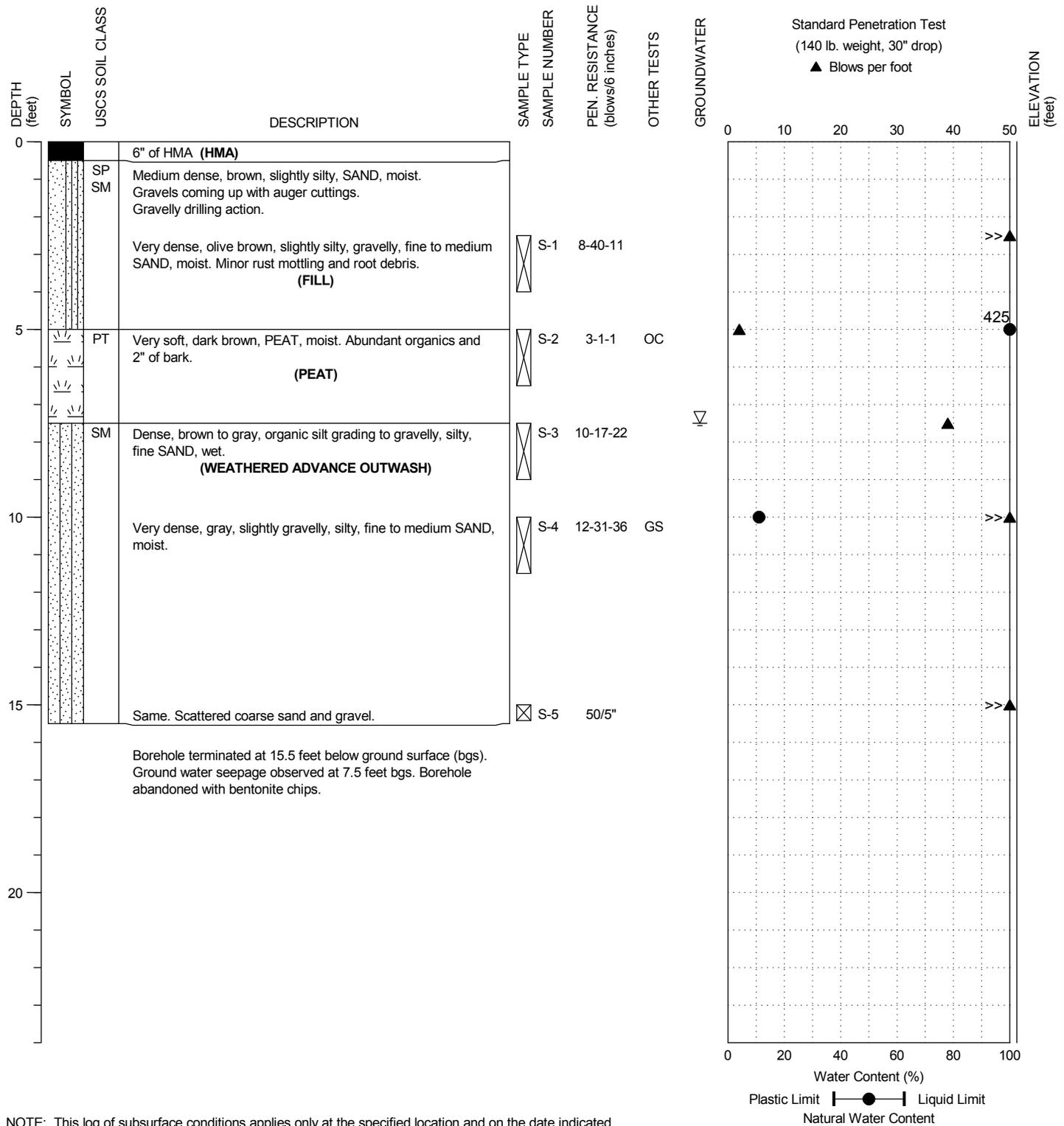
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-12

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2B

DATE STARTED: 7/9/2019
 DATE COMPLETED: 7/9/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



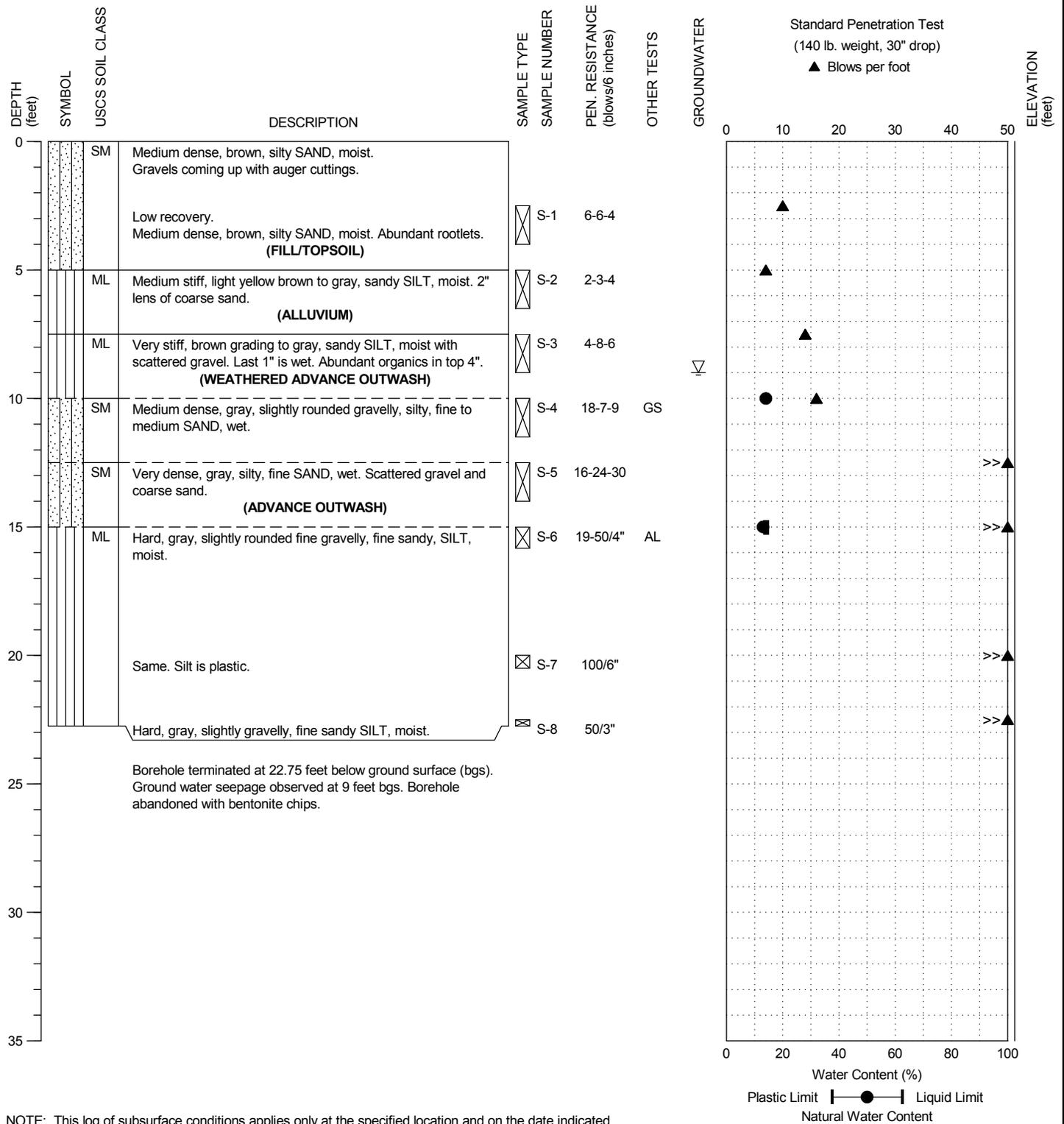
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 Lynnwood, Washington

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 BH-13

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2B

DATE STARTED: 7/1/2019
 DATE COMPLETED: 7/1/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



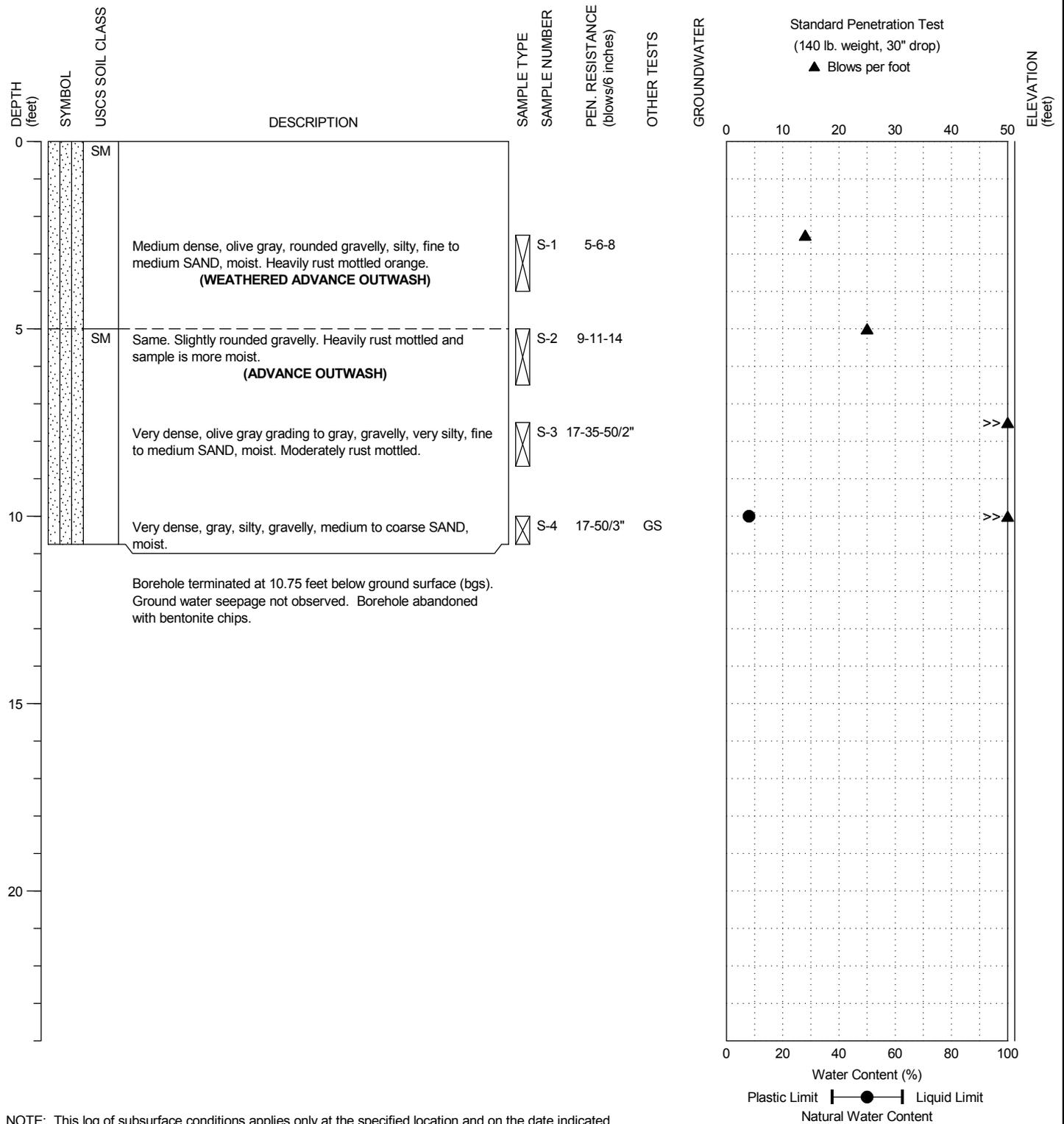
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 Lynnwood, Washington

BORING:
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PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2C

DATE STARTED: 7/8/2019
 DATE COMPLETED: 7/8/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



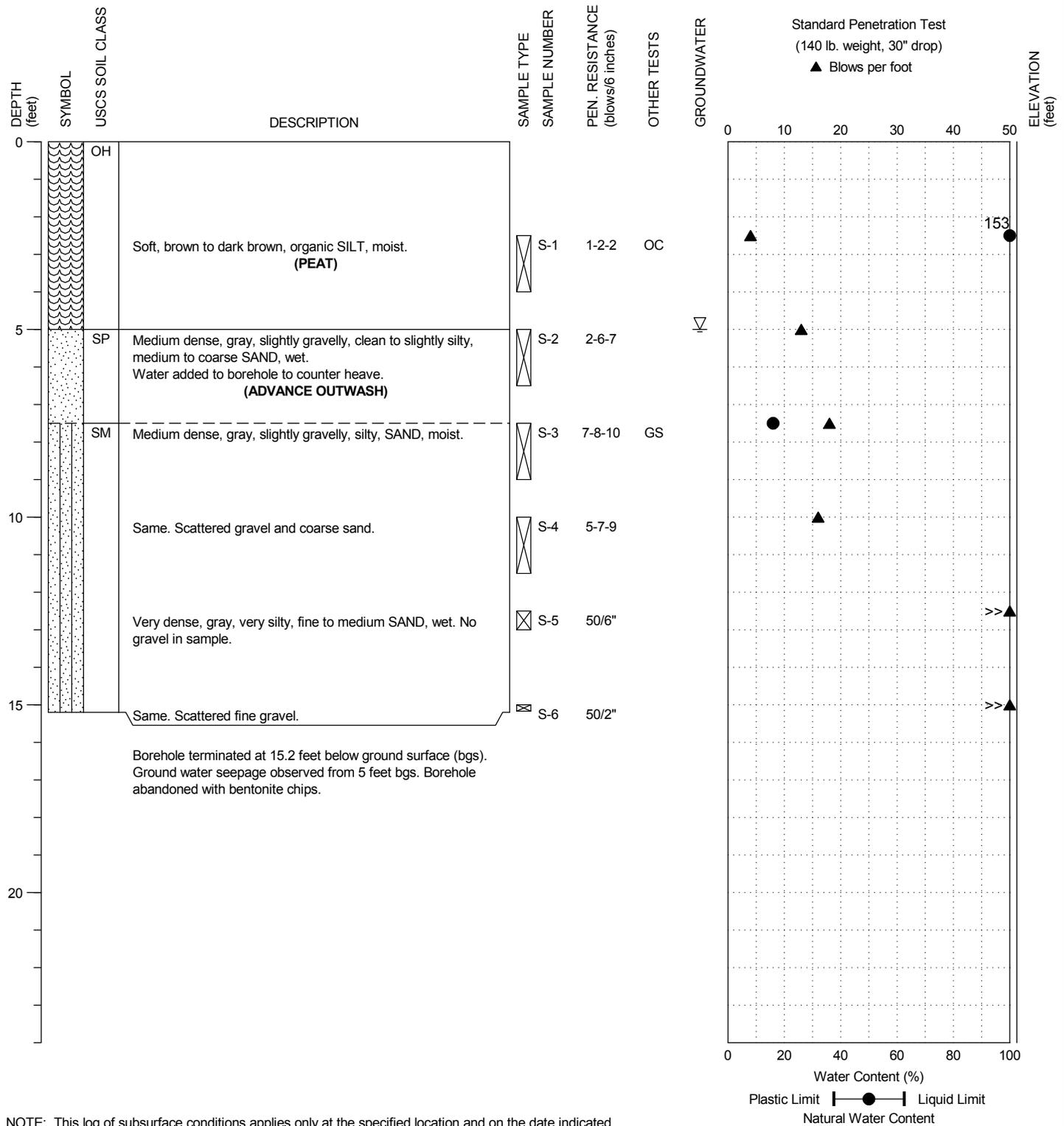
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-15

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2C

DATE STARTED: 7/8/2019
 DATE COMPLETED: 7/8/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



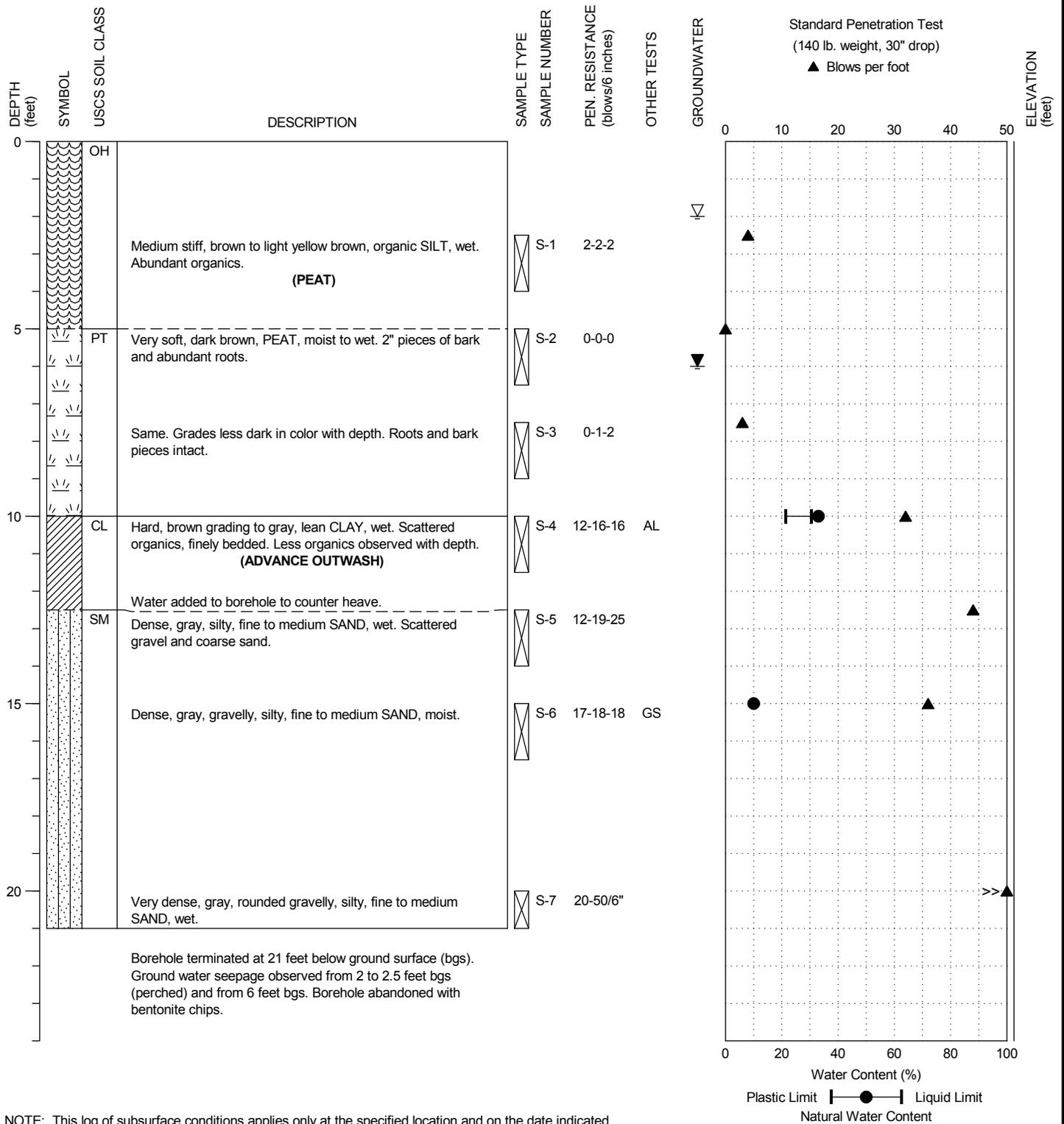
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-16

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2C

DATE STARTED: 7/8/2019
 DATE COMPLETED: 7/8/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



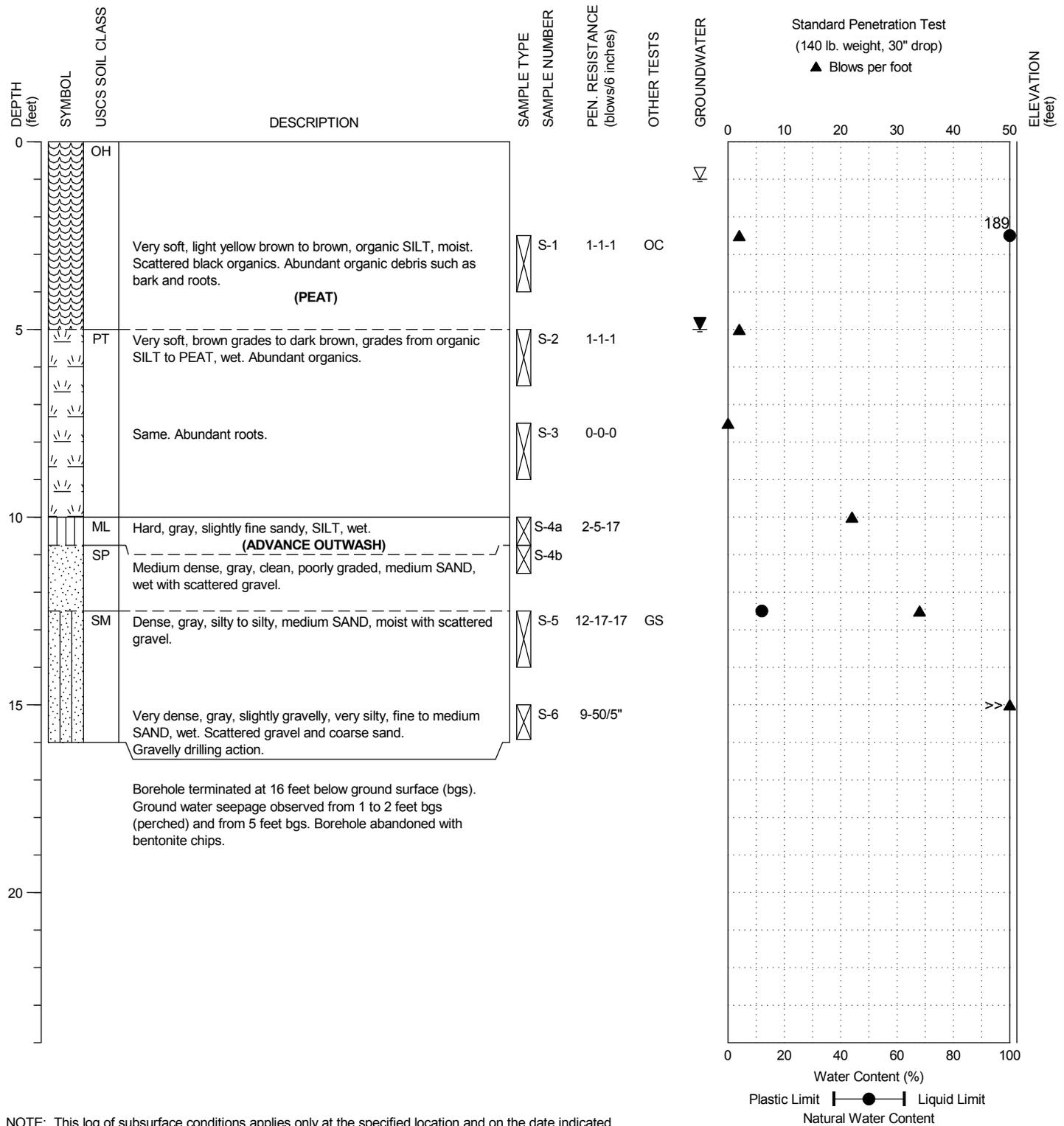
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-17

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2C

DATE STARTED: 7/8/2019
 DATE COMPLETED: 7/8/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



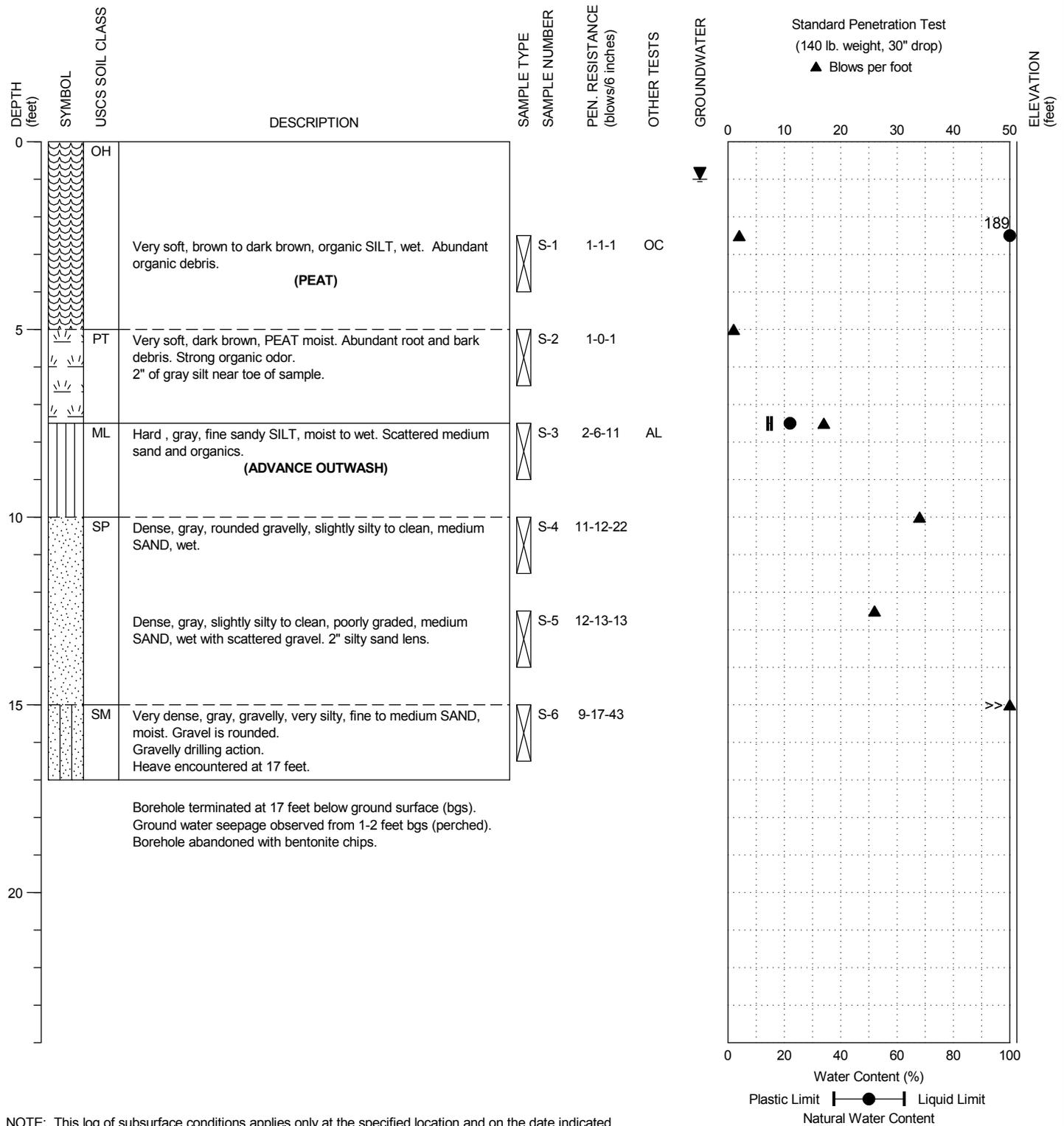
Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-18

PAGE: 1 of 1

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 SAMPLING METHOD: SPT w/ Cathead
 LOCATION: See Figure 2C

DATE STARTED: 7/8/2019
 DATE COMPLETED: 7/8/2019
 LOGGED BY: S. Khandaker



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Scriber Creek Trail
 Lynnwood, Washington

BORING:
 BH-19

PAGE: 1 of 1

APPENDIX B

LABORATORY AND FIELD TESTING

DRAFT

APPENDIX B

LABORATORY INVESTIGATION

Representative soil samples obtained from our explorations were placed in plastic bags to prevent loss of moisture and transported to our Bothell, Washington, laboratory for further examination and testing. Laboratory tests were conducted on selected soil samples to characterize relevant engineering and index properties of the site soils. Laboratory testing was conducted as described below:

MOISTURE CONTENT, ASH AND ORGANIC MATTER: Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 1050 C) and ash content method 'C' (burned at 4400 C). The test results are summarized on the logs in Appendix A and Figures B-1 and B-2. The results are percent by weight of dry soil.

PARTICLE SIZE ANALYSIS OF SOILS: Selected samples were tested to determine the particle (grain) size distribution of material in general accordance with ASTM D 422. The results are summarized on the attached Particle Size Analysis of Soils reports, Figures B-3 through B-9, which also provide information regarding the classification of the sample, and the moisture content at the time of testing.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): A select sample was tested using method ASTM D 4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index report, Figure B-10.

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION	
						LL	PL	PI						
BH-01,S-5	20.0	21.5	539.5	42.8								PT	Very dark brown, PEAT	
BH-01,S-7	30.0	31.5	9.6					22.9	71.9	5.2		SP-SM	Dark gray, poorly graded SAND with silt and gravel	
BH-02,S-5	15.0	16.5	847.7	71.6								PT	Very dark brown, PEAT	
BH-02,S-9	35.0	36.5	12.4					5.1	84.6	10.2		SP-SM	Gray, poorly graded SAND with silt	
BH-03,S-3	10.0	11.5	341.5	27.7								PT	Very dark brown, PEAT	
BH-03,S-4	15.0	16.5	22.4					7.6	90.5	1.9		SP	Dark gray, poorly graded SAND	
BH-04,S-2	5.0	6.5	222.2	22.8								PT	Very dark brown, PEAT with sand	
BH-04,S-4	15.0	16.5	15.2					6.7	87.7	5.6		SP-SM	Gray, poorly graded SAND with silt	
BH-05,S-7	25.0	26.5	272.5	29.6								PT	Very dark brown, PEAT	
BH-05,S-10	40.0	41.5	20.9					2.1	73.9	24.0		SM	Grayish-brown, silty SAND	
BH-06,S-5	15.0	16.5	722.9	61.8								PT	Very dark brown, PEAT	
BH-06,S-8	30.0	31.5	556.1						63.8	36.2		PT	Dark brown, PEAT	
BH-07,S-2	5.0	6.5	648.8	64.7								PT	Very dark brown, PEAT	
BH-07,S-6	20.0	21.5	12.8					19.7	69.3	11.0		SP-SM	Dark gray, poorly graded SAND with silt and gravel	
BH-08,S-3	7.5	9.0	616.8	85.7								PT	Very dark brown, PEAT	
BH-08,S-5	12.5	14.0	10.3					22.0	55.5	22.5		SM	Grayish-brown, silty SAND with gravel	
BH-09,S-2	5.0	6.5	421.6	52.0								PT	Very dark brown, PEAT	
BH-09,S-4	10.0	11.5	842.3					45.8	54.3	0.0		PT	Very dark brown, PEAT	
BH-10,S-6b	16.0	16.5	23.6					21		17	4		ML	Gray, SILT
BH-10,S-7	20.0	21.5	12.0					12.7	68.9	18.4		SM	Grayish-brown, silty SAND	

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.



Scriber Creek Trail
Lynnwood, Washington

SUMMARY OF
MATERIAL PROPERTIES

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PROJECT NO.: 2018-102-21 T300 FIGURE: B-1

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
BH-11,S-4	10.0	11.5	12.2						31.6	55.1	13.4	SM	Grayish-brown, silty SAND with gravel
BH-11,S-8	25.0	26.5	11.2						18.8	70.0	11.1	SP-SM	Olive-brown, poorly graded SAND with silt and gravel
BH-12,S-5	12.5	14.0	95.2			110	74	36				OH	Grayish-brown, organic SILT
BH-13,S-2	5.0	6.5	425.2	67.2								PT	Very dark brown, PEAT
BH-13,S-4	10.0	11.5	11.1						8.4	51.9	39.6	SM	Gray, silty SAND
BH-14,S-4	10.0	11.5	14.2						22.6	56.7	20.8	SM	Dark gray, silty SAND with gravel
BH-14,S-6	15.0	15.8	13.2			15	13	2				ML	Gray, SILT
BH-15,S-4	10.0	10.8	8.2						23.6	53.6	22.7	SM	Grayish-brown, silty SAND with gravel
BH-16,S-1	2.5	4.0	152.9	11.6								OH	Olive-brown, organic SILT
BH-16,S-3	7.5	9.0	15.9						7.4	65.3	27.3	SM	Gray, silty SAND
BH-17,S-4	10.0	11.5	32.6			31	21	10				CL	Gray, lean CLAY
BH-17,S-6	15.0	16.5	10.2						18.5	59.1	22.4	SM	Dark gray, silty SAND with gravel
BH-18,S-1	2.5	4.0	188.9	12.3								OH	Olive-brown, organic SILT
BH-18,S-5	12.5	14.0	12.2						14.1	56.7	29.3	SM	Grayish-brown, silty SAND
BH-19,S-1	2.5	4.0	188.8	10.8								OH	Olive-brown, organic SILT
BH-19,S-3	7.5	9.0	22.2			15	14	1				ML	Gray, SILT

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.



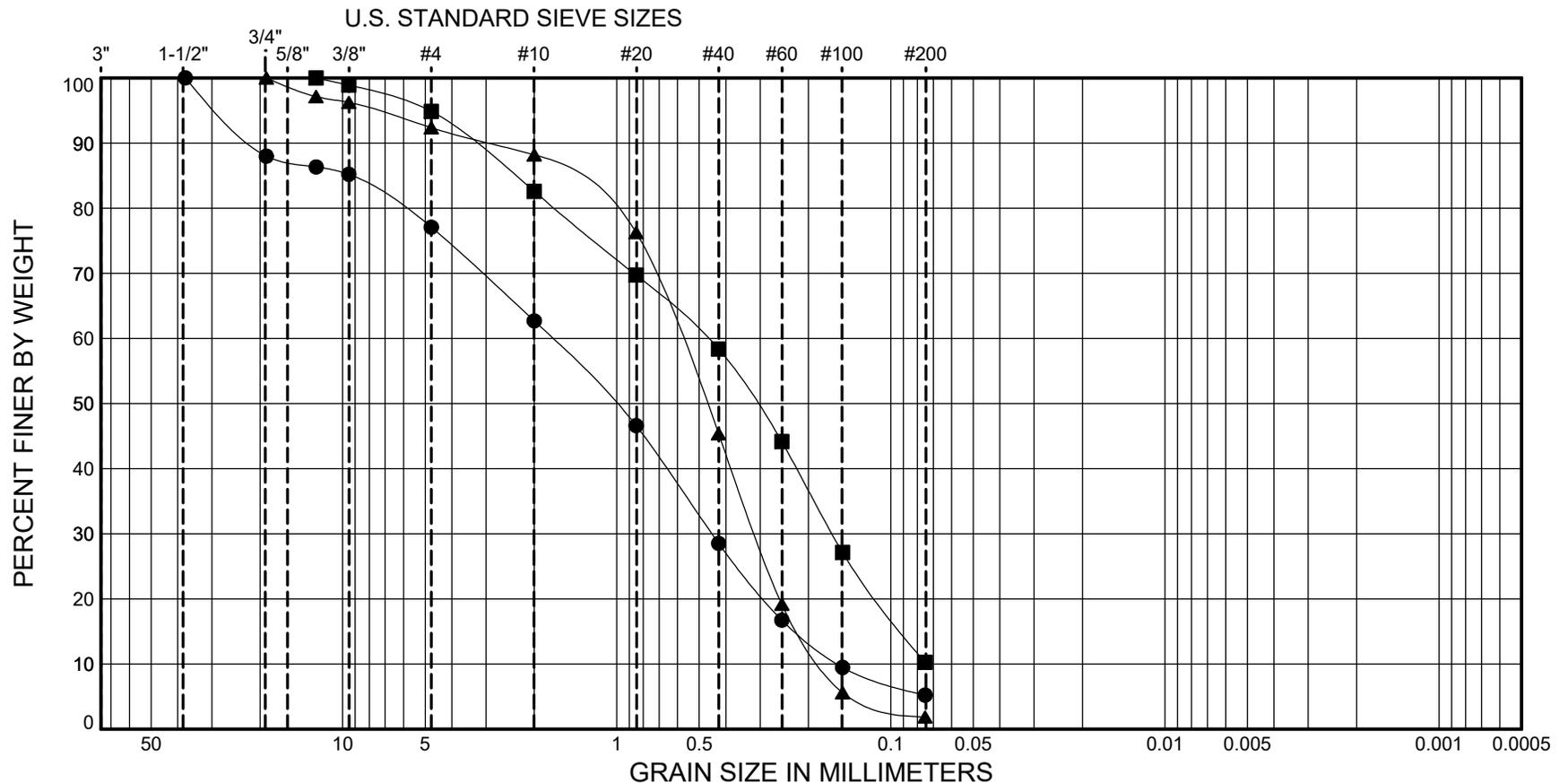
Scriber Creek Trail
Lynnwood, Washington

SUMMARY OF
MATERIAL PROPERTIES

PAGE: 2 of 2

PROJECT NO.: 2018-102-21 T300 FIGURE: B-2

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



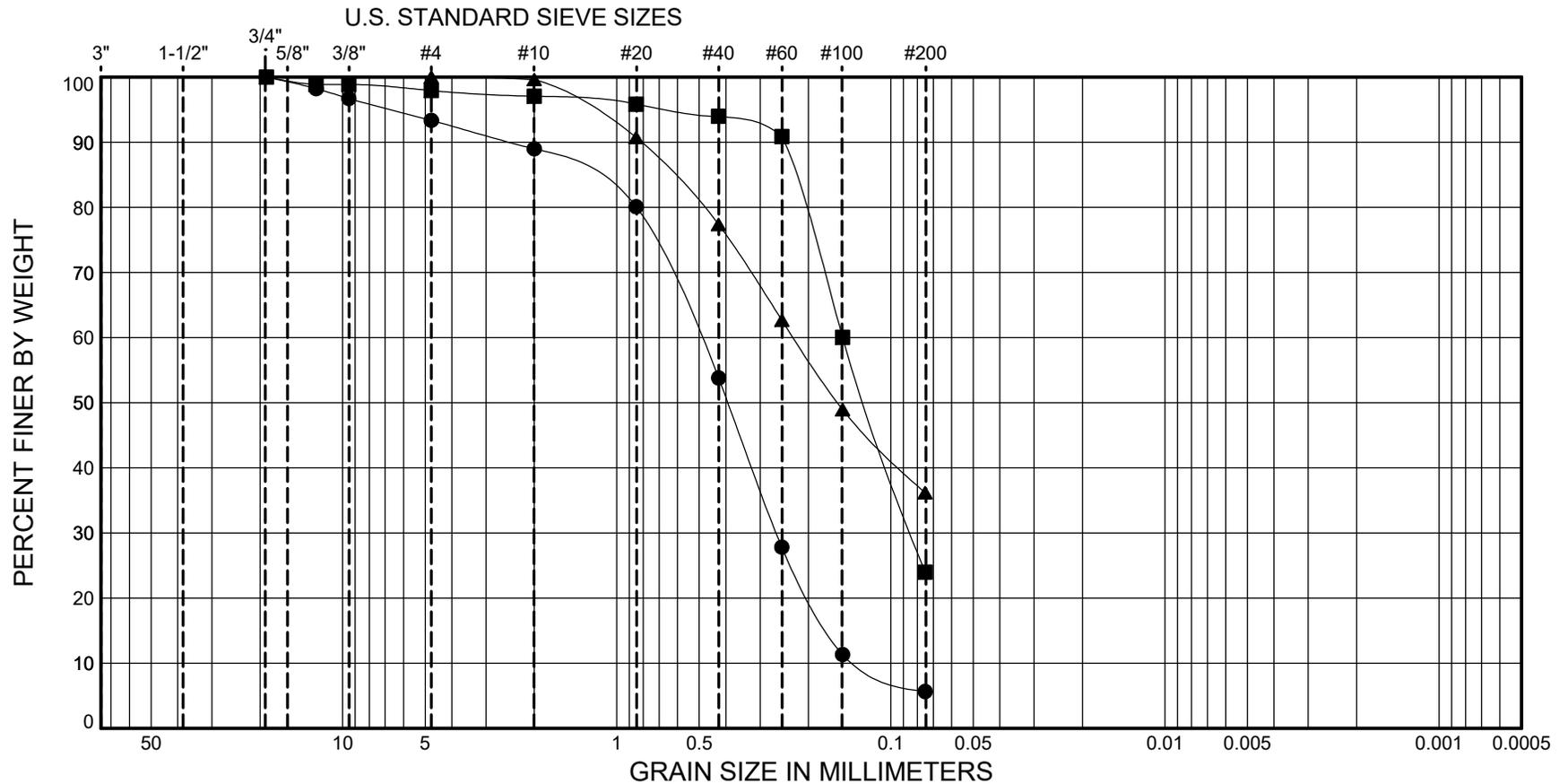
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-01	S-7	30.0 - 31.5	(SP-SM) Dark gray, poorly graded SAND with silt and gravel	10				22.9	71.9	5.2
■	BH-02	S-9	35.0 - 36.5	(SP-SM) Gray, poorly graded SAND with silt	12				5.1	84.6	10.2
▲	BH-03	S-4	15.0 - 16.5	(SP) Dark gray, poorly graded SAND	22				7.6	90.5	1.9



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**PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913**

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



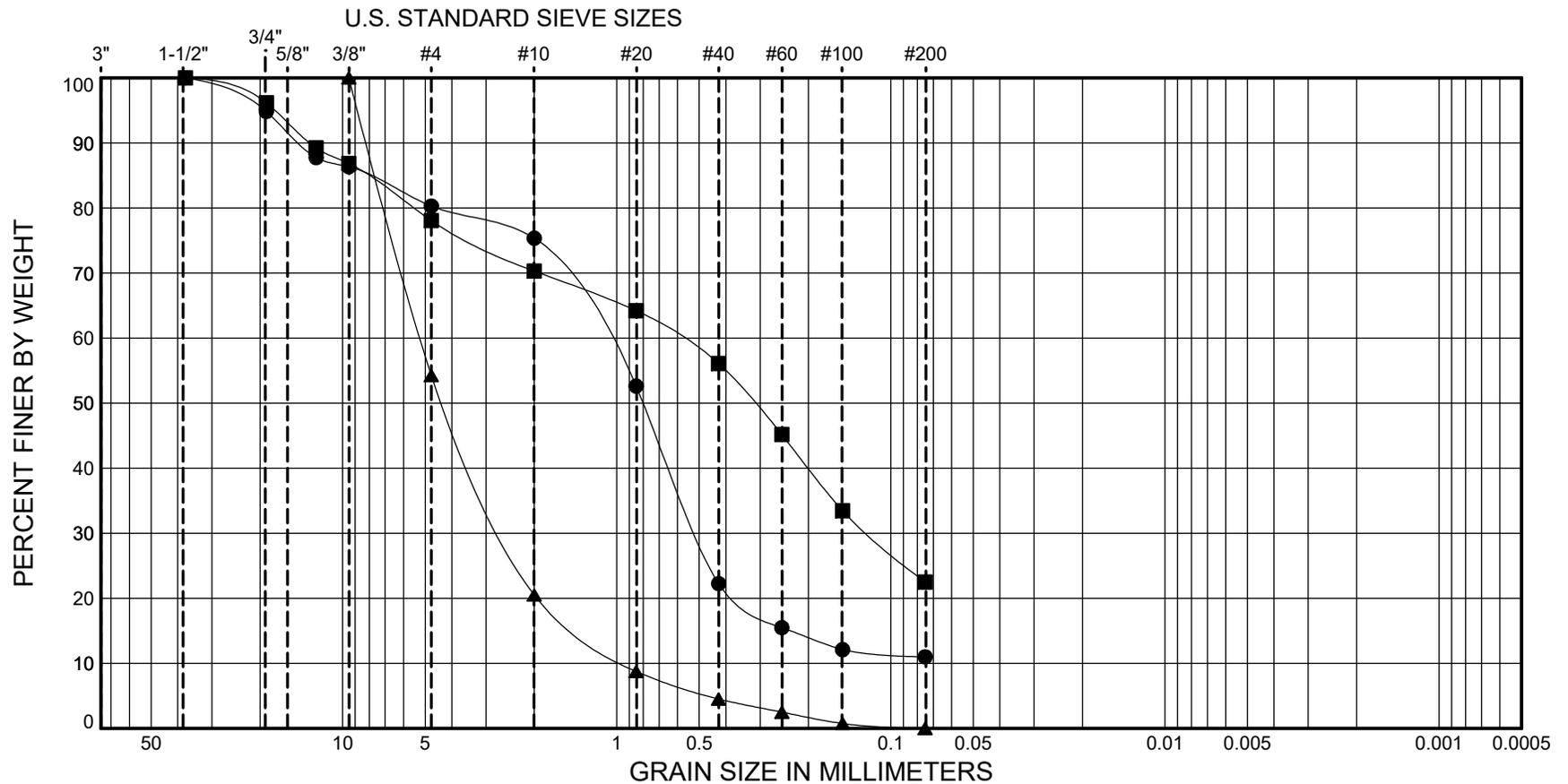
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-04	S-4	15.0 - 16.5	(SP-SM) Gray, poorly graded SAND with silt	15				6.7	87.7	5.6
■	BH-05	S-10	40.0 - 41.5	(SM) Grayish-brown, silty SAND	21				2.1	73.9	24.0
▲	BH-06	S-8	30.0 - 31.5	(PT) Dark brown, PEAT	556					63.8	36.2



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**PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913**

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



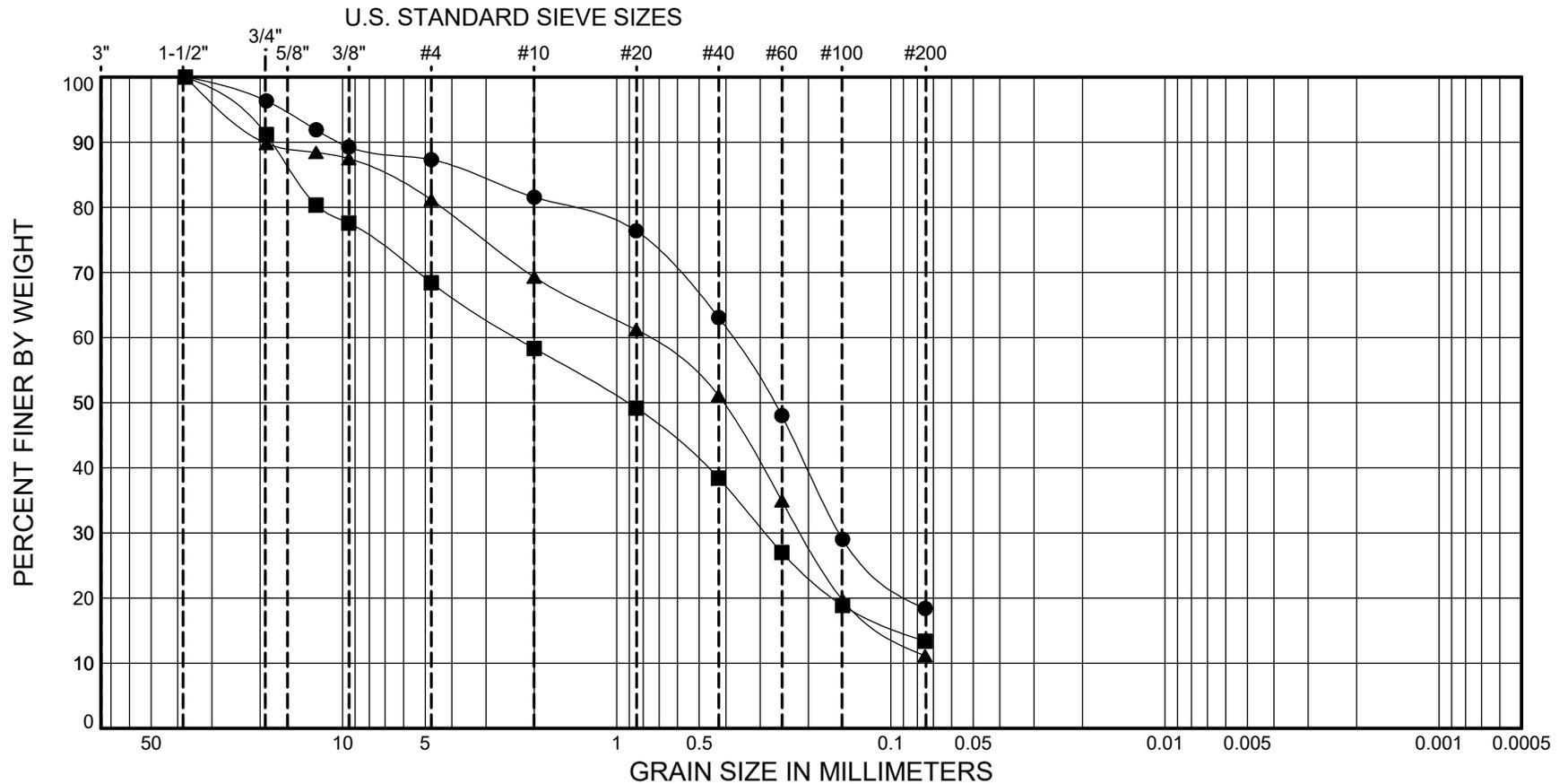
SYMBOL	SAMPLE	DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-07	S-6	20.0 - 21.5 (SP-SM) Dark gray, poorly graded SAND with silt and gravel	13				19.7	69.3	11.0
■	BH-08	S-5	12.5 - 14.0 (SM) Grayish-brown, silty SAND with gravel	10				22.0	55.5	22.5
▲	BH-09	S-4	10.0 - 11.5 (PT) Very dark brown, PEAT	842				45.8	54.3	0.0



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PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



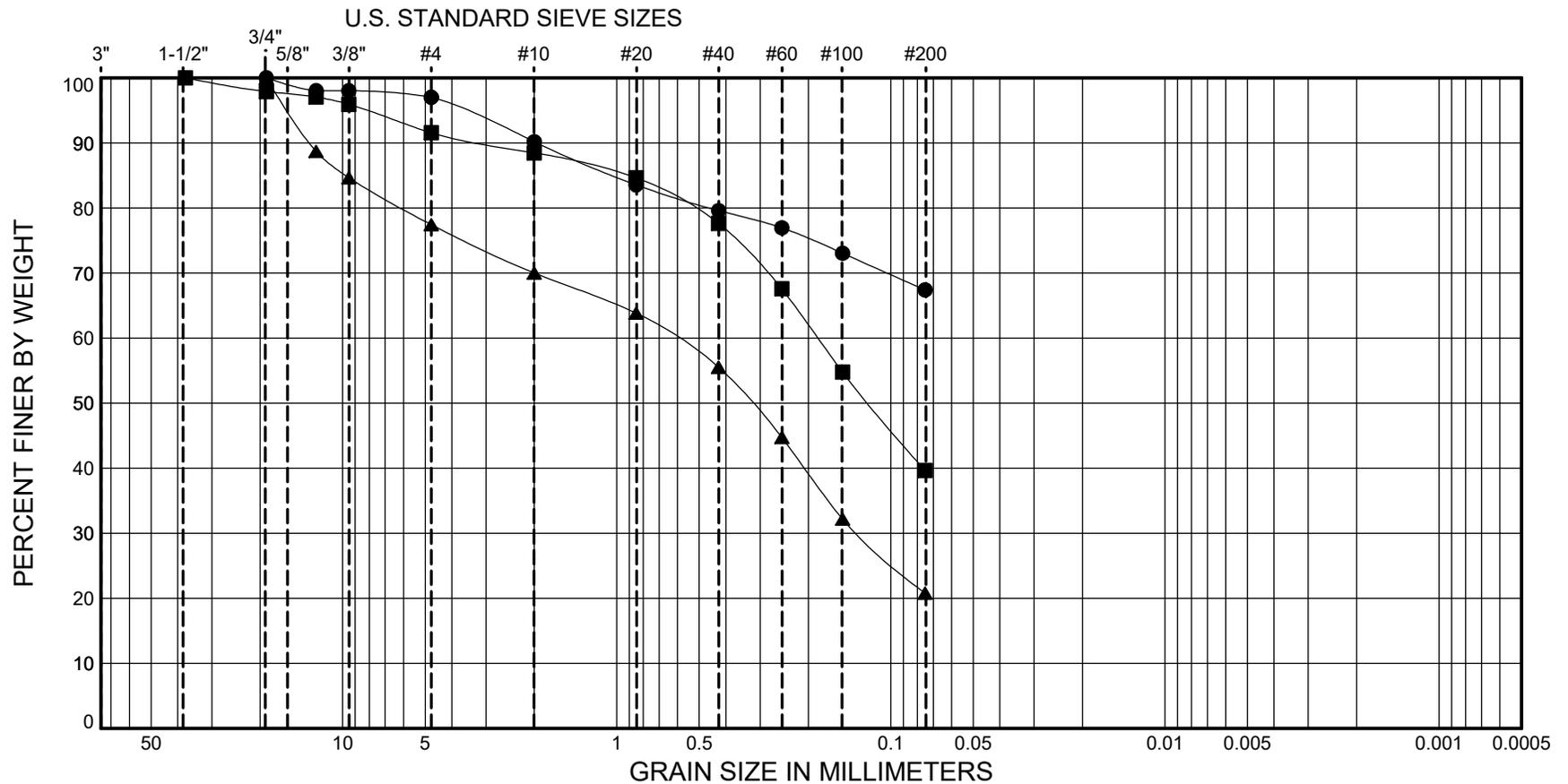
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-10	S-7	20.0 - 21.5	(SM) Grayish-brown, silty SAND	12				12.7	68.9	18.4
■	BH-11	S-4	10.0 - 11.5	(SM) Grayish-brown, silty SAND with gravel	12				31.6	55.1	13.4
▲	BH-11	S-8	25.0 - 26.5	(SP-SM) Olive-brown, poorly graded SAND with silt and gravel	11				18.8	70.0	11.1



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PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



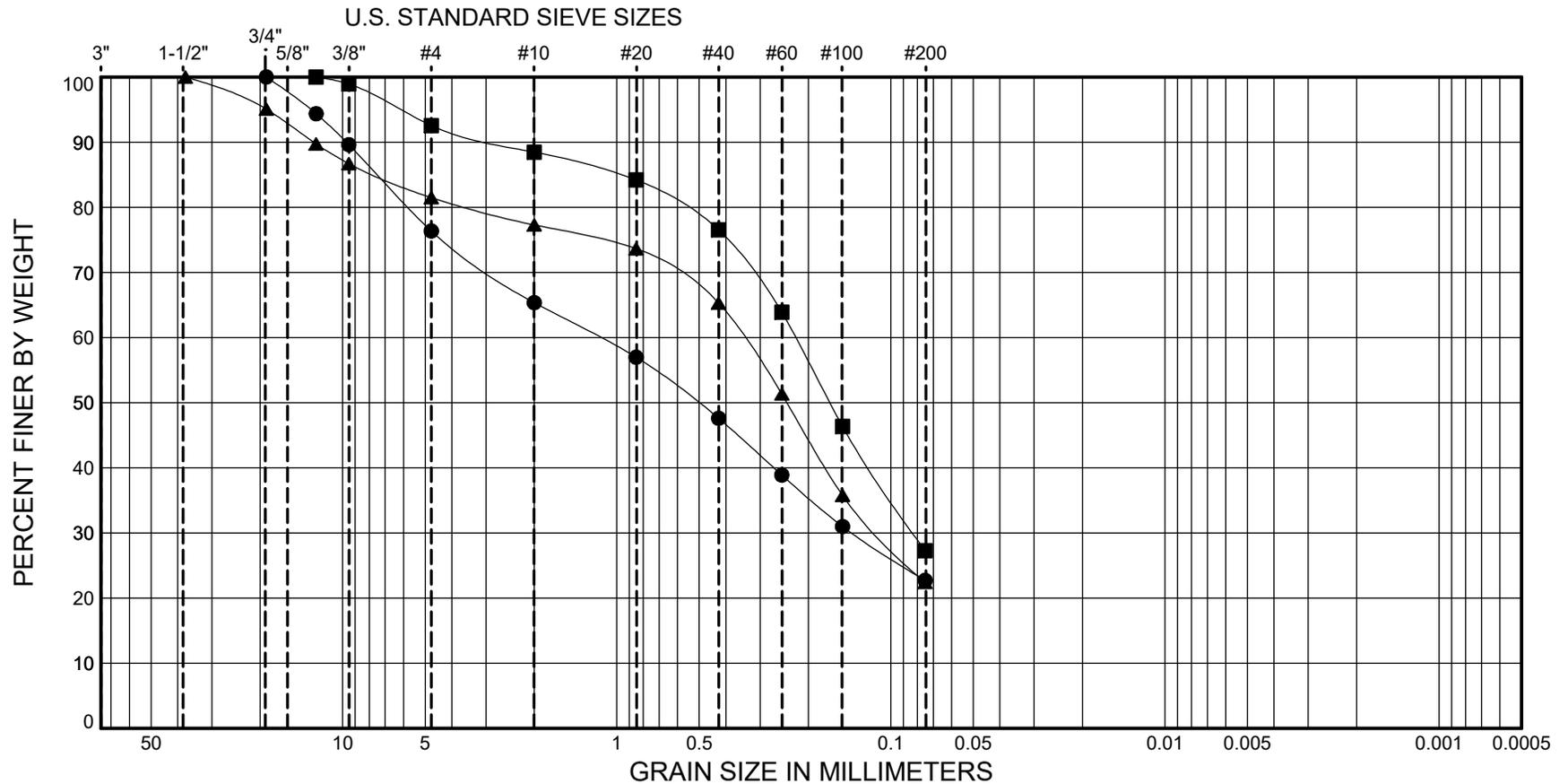
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-12	S-2	5.0 - 6.5	(OH) Grayish-brown, sandy organic SILT	82				3.0	29.6	67.4
■	BH-13	S-4	10.0 - 11.5	(SM) Gray, silty SAND	11				8.4	51.9	39.6
▲	BH-14	S-4	10.0 - 11.5	(SM) Dark gray, silty SAND with gravel	14				22.6	56.7	20.8



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PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		



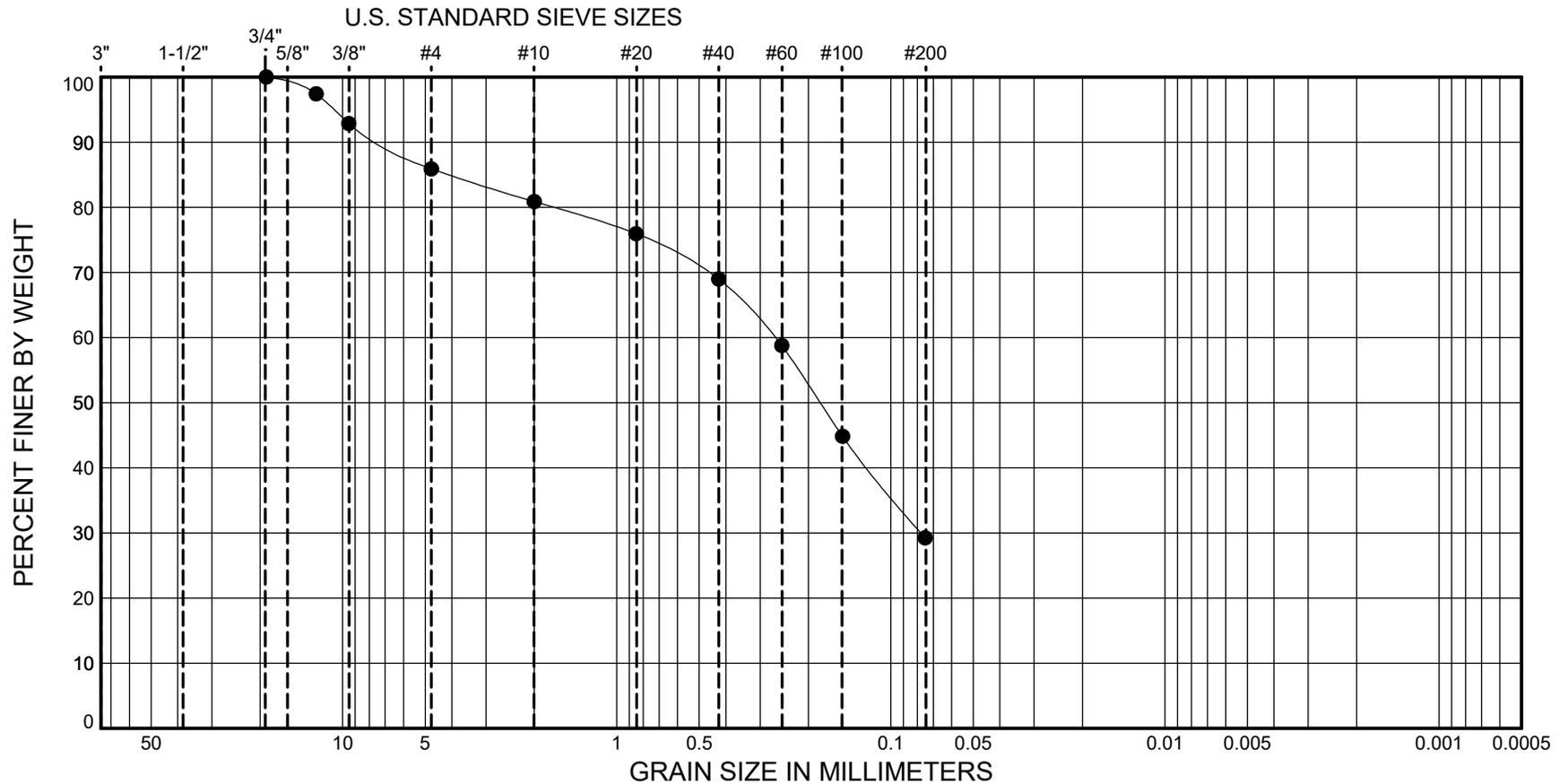
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-15	S-4	10.0 - 10.8	(SM) Grayish-brown, silty SAND with gravel	8				23.6	53.6	22.7
■	BH-16	S-3	7.5 - 9.0	(SM) Gray, silty SAND	16				7.4	65.3	27.3
▲	BH-17	S-6	15.0 - 16.5	(SM) Dark gray, silty SAND with gravel	10				18.5	59.1	22.4



Scriber Creek Trail
Lynnwood, Washington

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

GRAVEL		SAND			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		

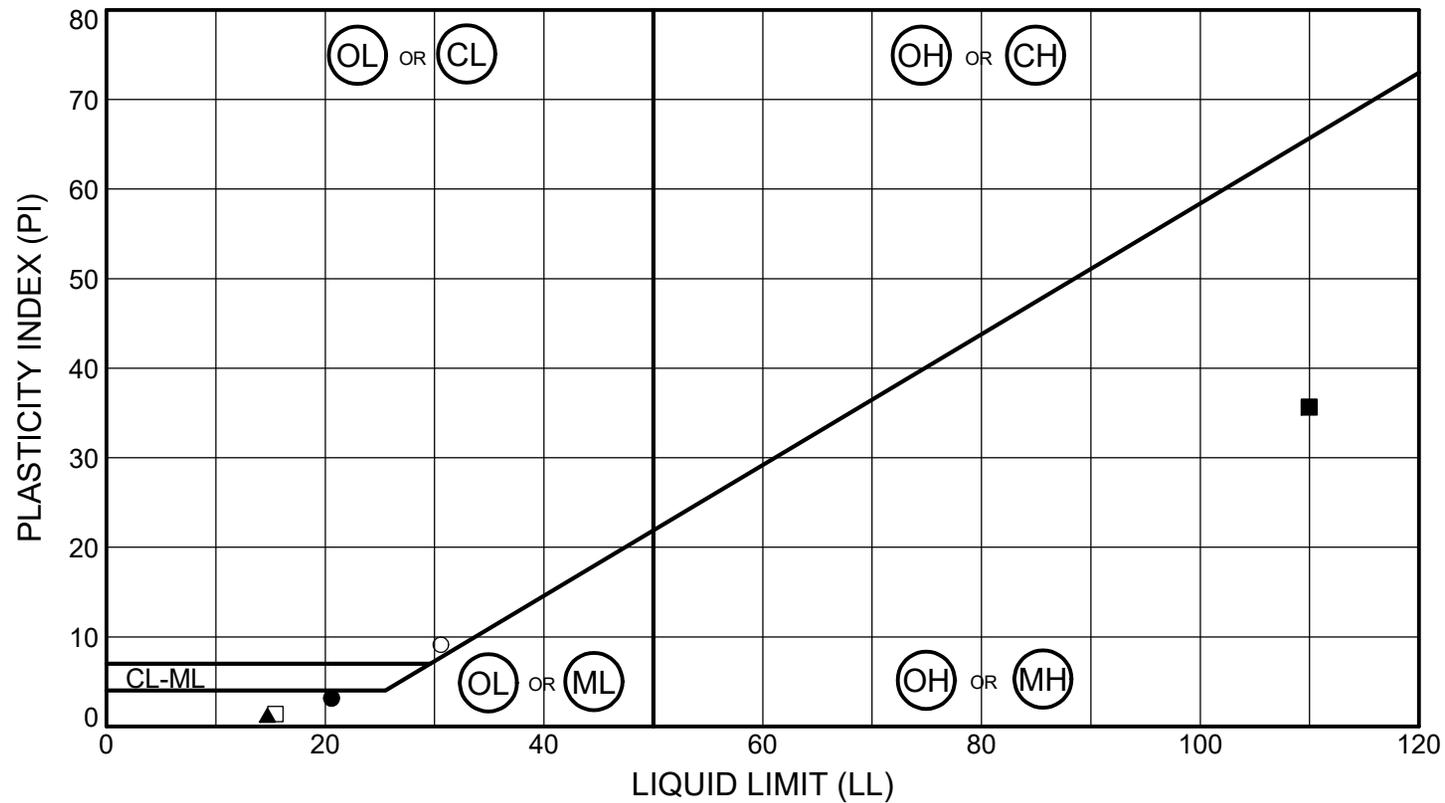


SYMBOL	SAMPLE	DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-18 S-5	12.5 - 14.0	(SM) Grayish-brown, silty SAND	12				14.1	56.7	29.3



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PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	BH-10	S-6b	16.0 - 16.5	(ML) Gray, SILT	24	21	17	4	
■	BH-12	S-5	12.5 - 14.0	(OH) Grayish-brown, organic SILT	95	110	74	36	
▲	BH-14	S-6	15.0 - 15.8	(ML) Gray, SILT	13	15	13	2	
○	BH-17	S-4	10.0 - 11.5	(CL) Gray, lean CLAY	33	31	21	10	
□	BH-19	S-3	7.5 - 9.0	(ML) Gray, SILT	22	15	14	1	

APPENDIX B
PERMITS
(Obtained by Contracting Agency)